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Heier Watt

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T H E

I M P R O V E M E N T

O F T H E

M I N D.

A D V E R T I S E M E N T.

“ Few books have been perused by me with greater pleasure than his *Improvement of the Mind*, of which the radical principles may indeed be found in Locke's *Conduet of the Understanding*; but they are so expanded and ramified by *Watts*, as to confer on him the merit of a work in the highest degree useful and pleasing. Whoever has the care of instructing others, may be charged with deficiency in his duty if this book is not recommended,”

Dr. Johnson's Life of Dr. Watts.

THE
IMPROVEMENT
OF THE
MIND:

OR, A
SUPPLEMENT
TO THE
ART OF LOGIC:

CONTAINING A VARIETY OF
REMARKS AND RULES

FOR THE
ATTAINMENT and COMMUNICATION of useful
Knowledge, in RELIGION, in the SCIENCES,
and in common Life.

BY *ISAAC WATTS*, D.D.

L O N D O N:

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T H E
P R E F A C E.

IN the last page of the Treatise of Logic which I published many years ago, it is observed, that there are several other things which might assist the cultivation of the mind, and its improvement in knowledge, which are not usually represented among the principles or precepts of that art or science. These are the subjects which compose this book; these are the sentiments and rules, many of which I had then in view, and which I now venture into public light.

THE present Treatise, if it may assume the honour of that name, is made up of a variety of remarks and directions for the improvement of the mind in useful knowledge. It was collected from the observations which I had made on my own studies,
and

and on the temper and sentiments, the humour and conduct of other men in their pursuit of learning, or in the affairs of life; and it has been considerably assisted by occasional collections in the course of my reading, from many authors and on different subjects. I confess, in far the greatest part I stand bound to answer for the weaknesses or defects that will be found in these papers, not being able to point to other writers, whence the twentieth part of them is derived.

THE work was composed at different times, and by slow degrees. Now and then indeed it spread itself into branches and leaves like a plant in *April*, and advanced seven or eight pages in a week; and sometimes it lay by without growth, like a vegetable in the winter, and did not increase half so much in the revolution of a year.

As these thoughts occurred to me in reading or meditation, or in my notices of the various appearances of things among mankind, they were thrown under those heads which make the present titles of the chapters, and were by degrees reduced to something like a method, such as the subject would admit.

ON these accounts it is not to be expected that the same accurate order should be observed

observed either in the whole book, or in the particular chapters thereof, which is necessary in the system of any science, whose scheme is projected at once. A book which has been twenty years a writing, may be indulged in some variety of style and manner, though I hope there will not be found any great difference of sentiment; for wherein I had improved in later years beyond what I had first written, a few dashes and alterations have corrected the mistakes: and if the candour of the reader will but allow what is defective in one place, to be supplied by additions from another, I hope there will be found a sufficient reconciliation of what might seem at first to be scarcely consistent.

THE language and dress of these sentiments is such as the present temper of mind dictated, whether it were grave or pleasant, severe or smiling. If there has been any thing expressed with too much severity, I suspect it will be found to fall upon those sneering or daring writers of the age against religion, and against the christian scheme, who seem to have left reason, or decency, or both behind them in some of their writings.

THE same apology of the length of years in composing this book, may serve also to excuse a repetition of the same sentiments

timents which may happen to be found in different places without the author's design; but in other pages it was intended, so that those rules for the conduct of the understanding which are most necessary, should be set in several lights, that they might with more frequency and more force impress the soul. I shall be sufficiently satisfied with the good humour and lenity of my readers, if they will please to regard these papers as parcels of imperfect sketches, which were designed by a sudden pencil, and in a thousand leisure moments, to be one day collected into landskips of some little prospects in the regions of learning, and in the world of common life, pointing out the fairest and most fruitful spots, as well as the rocks and wildernesses, and faithless morasses of the country. But I feel age advancing upon me, and my health is insufficient to perfect what I had designed, to increase and amplify these remarks, to confirm and improve these rules, and to illuminate the several pages with a richer and more beautiful variety of examples. The subject is almost endless, and new writers in the present and in following ages may still find sufficient follies, weaknesses and dangers among mankind, to be represented in such a manner as to guard youth against them.

THESE

THESE hints, such as they are, I hope may be rendered some way useful to persons in younger years, who will favour them with a perusal, and who would seek the cultivation of their own understandings in the early days of life. Perhaps they may find something here which may awake a latent genius, and direct the studies of a willing mind. Perhaps it may point out to a student now and then, what may employ the most useful labours of his thoughts, and accelerate his diligence in the most momentous enquiries. Perhaps a sprightly youth may here meet with something to guard or warn him against mistakes, and withhold him at other times from those pursuits which are like to be fruitless and disappointing.

LET it be observed also, that in our age several of the ladies pursue science with success; and others of them are desirous of improving their reason even in common affairs of life, as well as the men: yet the characters which are here drawn occasionally, are almost universally applied to one sex; but if any of the other shall find a character which suits them, they may by a small change of the termination apply and assume it to themselves, and accept the instruction, the admonition, or the applause which is designed in it.

T H E R E

THERE is yet another thing which it is necessary my reader should be informed of; but whether he will call it fortunate or unhappy, I know not. It is sufficiently evident that the book consists of two parts: the first lays down remarks and rules how we may attain useful knowledge ourselves; and the second, how we may best communicate it to others. These were both designed to be printed in this volume: but a manuscript which hath been near twenty years in hand, may be easily supposed to allow of such difference in the hand-writing, so many lines altered, so many things interlined, and so many paragraphs and pages here and there inserted, that it was not easy to compute the number of sheets that it would make in print: and it now appears, that the remarks and rules about the communication of knowledge being excluded here, they must be left to another volume; wherein will be contained various observations relating to methods of instruction, the style and manner of it, the way of convincing other persons, of guarding youth against prejudices, of treating and managing the prejudices of men, of the use and abuse of authority, of education, and of the various things in which children and youth should be instructed, of their proper business and diversions, and
of

of the degrees of liberty and restraint therein, &c. Of all which I had once designed a more complete treatise; but my years advancing, I now despair to finish it.

THE essays or chapters on these subjects being already written, if I am favoured with a tolerable degree of health, will be put to the press, when the favourable acceptance of this *first part* shall give sufficient encouragement to proceed.

T H E

T H E
I M P R O V E M E N T
O F T H E
M I N D.

The First P A R T.

Directions for the Attainment of useful
Knowledge.

I N T R O D U C T I O N.

N O man is obliged to learn and know
every thing ; this can neither be
sought nor required, for it is utterly im-
possible : yet all persons are under some
obligation *to improve their own under-
standing*, otherwise it will be a barren de-
sart, or a forest overgrown with weeds
and brambles. Universal ignorance or
B infinite

2 INTRODUCTION

infinite errors will overspread the mind, which is utterly neglected and lies without any cultivation.

SKILL in the sciences is indeed the business and profession but of a small part of mankind; but there are many others placed in such an exalted rank in the world, as allows them much leisure and large opportunities to cultivate their reason, and to beautify and enrich their minds with various knowledge. Even the lower orders of men have particular callings in life, wherein they ought to acquire a just degree of skill, and this is not to be done well without thinking and *reasoning* about them.

THE common duties and benefits of society, which belong to every man living, as we are social creatures, and even our native and necessary relations to a family, a neighbourhood, or a government, oblige all persons whatsoever to use their *reasoning powers* upon a thousand occasions; every hour of life calls for some regular exercise of our judgment as to times and things, persons and actions; without a prudent and discreet determination in matters before us, we shall be plunged into perpetual errors in our conduct. Now that which should always be practised, must at some time be learnt.

BESIDES, every son and daughter of *Adam* has a most important concern in the affairs of a life to come, and therefore it is a matter of the highest moment for every one to understand, to judge, and to reason right about the things of religion. It is in vain for any to say, *we have no leisure or time for it*. The daily intervals of time, and vacancies from necessary labour, together with the one day in seven in the *Christian* world, allows sufficient time for this, if men would but apply themselves to it with half as much zeal and diligence as they do to the trifles and amusements of this life; and it would turn to infinitely better account.

THUS it appears to be the necessary duty and the interest of every person living to *improve his understanding, to inform his judgment, to treasure up useful knowledge, and to acquire the skill of good reasoning*, as far as his station, capacity and circumstances furnish him with proper means for it. Our mistakes in judgment may plunge us into much folly and guilt in practice. By acting without thought or reason, we dishonour the *God* that made us reasonable creatures, we often become injurious to our *neighbours, kindred or friends*, and we bring sin and misery upon *ourselves*: For we are accountable to *God* our judge for every part of our irregular and mistaken

4 INTRODUCTION

conduct, where he hath given us sufficient advantages to guard against those mistakes.

It is the design of *Logic* to give this improvement to the mind, and to teach us the *right use of reason in the acquirement and communication of all useful knowledge*: though the greatest part of writers on that subject have turned it into a composition of hard words, trifles and subtilties for the mere use of the schools, and that only to amuse the minds and the ears of men with empty sounds, which flatter their vanity, and puff up their pride with a pompous and glittering shew of false learning; and thus they have perverted the great and valuable design of that science.

A few modern writers have endeavoured to recover the honour of *Logic*, since that excellent author of the *Art of Thinking* led the way: among the rest I have presumed to make an attempt of the same kind, in a treatise published several years ago, wherein it was my constant aim to assist the reasoning powers of every rank and order of men, as well as to keep an eye to the best interest of the schools and the candidates of true learning. There I have endeavoured to shew the *mistakes* we are exposed to in our *conception, judgment and reasoning*; and pointed to the various *springs* of them. I have also laid down

I

many

many *general and particular rules* how to escape error, and attain truth in matters of the civil and religious life, as well as in the sciences.

BUT there are several other *observations* very pertinent to this purpose, which have not fallen so directly under any of those heads of discourse, or at least they would have swelled that treatise to an improper size; and therefore I have made a distinct collection of them here out of various authors, as well as from my own observation, and set them down under the following heads.

THE learned world who has done so much unmerited honour to that *logical* treatise, as to receive it into our two flourishing universities, may possibly admit this as a *second part* or *supplement* to that treatise. And I may venture to persuade myself, that if the common and the busy ranks of mankind, as well as the scholar and the gentleman, would but transcribe such rules into their understanding, and practise them, upon all occasions, there would be much more *truth* and *knowledge* found among men; and it is reasonable to hope that *justice*, *virtue* and *goodness* would attend as the happy consequents,

C H A P. I.

*General RULES for the Improvement of
KNOWLEDGE*.*

I. Rule. **D**E E P L Y possess your mind with the *vast importance of a good judgment*, and the rich and inestimable advantage of *right reasoning*. Review the Instances of your own misconduct in Life; think seriously with yourselves how many follies and sorrows you had escaped, and how much guilt and misery you had prevented, if from your early years you had but taken due pains to judge aright concerning persons, times and things. This will awaken you with lively vigour to address yourselves to the work of improving your reasoning powers, and seizing every opportunity and advantage for that end.

II. Rule. C O N S I D E R *the weaknesses, frailties and mistakes of human nature* in general, which arise from the very *constitution*

* Though the most of these following rules are chiefly addressed to those whom their fortune or their station require to addict themselves to the peculiar improvement of their minds in greater degrees of knowledge, yet every one who has leisure and opportunity to be acquainted with such writings as these, may find something among them for their own use.

tion of a soul united to an animal body, and subjected to many inconveniencies thereby. Consider the many additional weaknesſes, miſtakes and frailties which are derived from our original apoſtacy and fall from a ſtate of innocence; how much our powers of underſtanding are yet more darkened, enfeebled, and impoſed upon by our ſenſes, our fancies, and our unruly paſſions, &c. Consider the depth and difficulty of many truths, and the flattering appearances of falſhood, whence ariſes an infinite variety of dangers to which we are expoſed in our judgment of things. Read with greedineſs thoſe authors that treat of the doctrine of prejudices, prepoſſeſſions and ſprings of error, on purpoſe to make your ſoul watchful on all ſides, that it ſuffer not itſelf as far as poſſible to be impoſed upon by any of them. See more on this ſubject, Logic Part II. Chap. 3. and Part III. Chap. 3.

III. Rule. A SLIGHT VIEW of things ſo momentous is not ſufficient. You ſhould therefore contrive and praſtiſe ſome *proper methods to acquaint yourſelf with your own ignorance*, and to impreſs your mind with a deep and painful ſenſe of the low and imperfect degrees of your preſent knowledge, that you may be incited with labour and activity to purſue after greater meaſures. Among others you may find ſome ſuch *methods* as theſe ſucceſſful.

1. TAKE a wide survey now and then of the vast and unlimited regions of learning. Let your meditations run over the names of all the sciences, with their numerous branchings, and innumerable particular themes of knowledge ; and then reflect how few of them you are acquainted with in any tolerable degree. The most learned of mortals will never find occasion to act over again what is fabled of *Alexander the Great*, that when he had conquered what was called the *Eastern World*, he wept for want of more worlds to conquer. The worlds of science are immense and endless.

2. THINK what a numberless *variety of questions and difficulties* there are belonging even to that *particular science*, in which you have made the greatest progress, and how few of them there are in which you have arrived at a final and undoubted certainty ; excepting only those questions in the pure and *simple mathematics*, whose theorems are demonstrable and leave scarcely any doubt ; and yet even in the pursuit of some few of these, mankind have been strangely bewildered.

3. SPEND a few thoughts sometimes on the puzzling enquiries concerning *vacuums* and *atoms*, the *doctrine of infinites*, *indivisibles* and *incommensurables* in geometry, wherein there appear some insolvable difficulties :

culties : do this on purpose to give you a more sensible impression of the poverty of your understanding, and the imperfection of your knowledge. This will teach you what a vain thing it is to fancy that you know all things; and will instruct you to think modestly of your present attainments, when every *dust of the earth* and every *inch of empty space* surmounts your understanding and triumphs over your presumption. *Arithmo* had been bred up to accounts all his life, and thought himself a complete master of *numbers*. But when he was pushed hard to give the square root of the number 2, he tried at it, and laboured long in millesimal fractions, until he confessed there was no end of the enquiry; and yet he learnt so much modesty by this perplexing question, that he was afraid to say, *it was an impossible thing*. It is some good degree of improvement when we are afraid to be positive.

4. READ the accounts of those *vast treasures of knowledge*, which some of the *dead* have possessed, and some of the *living* do possess. Read and be astonished at the almost incredible advances which have been made in science. Acquaint yourselves with some *persons of great learning*, that by converse among them, and comparing yourselves with them, you may acquire a mean opinion of your own attainments, and

and may be thereby animated with new zeal, to equal them as far as possible, or to exceed: thus let your diligence be quickened by a generous and laudable emulation. If *Vanillus* had never met with *Scitorio* and *Polydes*, he had never imagined himself a mere novice in Philosophy, nor ever set himself to study in good earnest.

REMEMBER this, that if upon some few superficial acquirements you value, exalt and swell yourself as tho' you were a *man of learning* already, you are thereby building a most unpassable barrier against all improvement; you will lie down and indulge idleness, and rest yourself contented in the midst of deep and shameful ignorance. *Multi ad scientiam pervenissent si se illuc pervenisse non putassent.*

IV. Rule. PRESUME not too much upon a *bright genius*, a *ready wit*, and *good parts*, for this without labour and study will never make a man of knowledge and wisdom. This has been an unhappy temptation to persons of a vigorous and gay fancy to despise learning and study. They have been acknowledged to shine in an assembly, and sparkle in discourse upon common topics, and thence they took it into their heads to abandon reading and labour, and grow old in ignorance; but when they had lost the vivacities of animal nature and youth, they became stupid

pid and sottish even to contempt and ridicule. *Lucidas* and *Scintillo* are young men of this stamp: they shine in conversation, they spread their native riches before the ignorant; they pride themselves in their own lively images of fancy, and imagine themselves wise and learned; but they had best avoid the *presence of the skillful* and the *test of reasoning*; and I would advise them once a day to think forward a little, what a contemptible figure they will make in age.

THE witty men sometimes have sense enough to know their own *foible*, and therefore they craftily shun the attacks of argument, or boldly pretend to despise and renounce them; because they are conscious of their own ignorance, and inwardly confess their want of acquaintance with the *skill of reasoning*.

V. *Rule*. As you are not to fancy yourself a *learned man* because you are blessed with a *ready wit*, so neither must you imagine that *large and laborious reading*, and a *strong memory*, can denominate you *truly wise*.

WHAT that excellent critic has determined when he decided the question, whether wit or study makes the best poet, may well be applied to every sort of learning——

———*Ego*

—*Ego nec studium sine divite venâ
Nec rude quid profit, video, ingenium: alterius
sic*

Altera poscit opem res, & conjurat amicè.

Hor. de Art. Poet.

Thus made English:

Concerning *poets* there has been contest,
Whether they're made by *art*, or *nature* best:
But if I may presume in this affair,
Among the rest my judgment to declare,
No *art* without a genius will avail,
And *parts* without the help of *art* will fail:
But both ingredients jointly must unite,
Or verse will never shine with a transcen-
dent light, Oldham.

It is meditation and studious thought, it is the exercise of your own reason and judgment upon all you read, that gives good sense even to the best genius, and affords your understanding the truest improvement. A boy of strong memory may repeat a whole book of *Euclid*, yet be no *Geometrician*; for he may not be able perhaps to demonstrate one single theorem. *Memorino* has learnt half the bible by heart, and is become a living concordance and a speaking index to theological folios, and yet he understands little of divinity.

A well

A well furnished library and a capacious memory, are indeed of singular use toward the improvement of the mind; but if all your learning be nothing else but a mere amassment of what others have written, without a due penetration into their meaning, and without a judicious choice and determination of your own sentiments, I do not see what title your *head* has to true learning above your *shelves*. Though you have read *Philosophy* and *Theology*, *Morals*, and *Metaphysics* in abundance, and every other art and science, yet if your *memory* is the only faculty employed, with the neglect of your *reasoning powers*, you can justly claim no higher character but that of a *good historian of the sciences*.

HERE note, Many of the *foregoing advices* are more peculiarly proper for those who are conceited of their abilities, and are ready to entertain a high opinion of themselves. But a modest humble youth of a good genius, should not suffer himself to be discouraged by any of these considerations. They are designed only as a spur to diligence, and a guard against vanity and pride.

VI. *Rule*. Be not so weak as to imagine that a *life of learning* is a *life of laziness and ease*: dare not give up yourself to any of the learned professions unless you are resolved to *labour hard at study*, and can
make

make it your delight and the joy of your life, according to the motto of our late Lord Chancellor *King*.

Labor ipse voluptas.

It is no idle thing to be a *scholar indeed*. A man much addicted to luxury and pleasure, recreation and pastime, should never pretend to devote himself entirely to the sciences, unless his soul be so reformed and refined that he can taste all these entertainments eminently in his closet, among his books and papers. *Sobrino* is a temperate man and a philosopher, and he feeds upon partridge and pheasant, venison and ragoûts, and every delicacy, in a growing understanding, and a serene and healthy soul, though he dines on a dish of sprouts or turnips. *Languinos* loved his ease, and therefore chose to be brought up a scholar; he had much indolence in his temper, and as he never cared for study, he falls under universal contempt in his profession, because he has nothing but the gown and the name.

VII. LET the hope of new discoveries, as well as the satisfaction and pleasure of known truths, animate your daily industry. *Do not think learning in general is arrived at its perfection*, or that the knowledge of any particular subject in any science cannot be improved, merely because it has lain five hundred or a thousand years without im-

improvement. The present age, by the blessing of God on the ingenuity and diligence of men, has brought to light such truths in natural philosophy, and such discoveries in the heavens and the earth, as seemed to be beyond the reach of man. But may not there be *Sir Isaac Newtons* in every science? You should never despair therefore of finding out that which has never yet been found, unless you see something in the nature of it which renders it unsearchable, and above the reach of our faculties.

NOR should a student in divinity imagine that our age is arrived at a full understanding of every thing which can be known by the scriptures. Every age since the reformation hath thrown some further light on difficult texts and paragraphs of the bible, which have been long obscured by the early rise of antichrist: and since there are at present many difficulties, and darkneses hanging about certain truths of the Christian Religion, and since several of these relate to important doctrines, such as the *Origin of Sin*, the *Fall of Adam*, the *Person of Christ*, the *Blessed Trinity*, and the *Decrees of God*, &c. which do still embarrass the minds of honest and enquiring readers, and which make work for noisy controversy: it is certain there are several things in the bible yet unknown and not sufficiently

ently explained, and it is certain that there is some way to solve these difficulties; and to reconcile these seeming contradictions. And why may not a sincere searcher of truth in the present age, by labour, diligence, study, and prayer, with the best use of his reasoning powers, find out the proper solution of those knots and perplexities which have hitherto been unsolved, and which have afforded matter for angry quarrelling? Happy is every man who shall be favoured of Heaven, to give a helping hand towards that introduction of the blessed age of light and love.

VIII. *Do not hover always on the surface of things*, nor take up suddenly with mere appearances ; but penetrate into the depth of matters, as far as your time and circumstances allow, especially in those things which relate to your own profession. Do not indulge yourselves to judge of things by the first glimpse, or a short and superficial view of them ; for this will fill the mind with errors and prejudices, and give it a wrong turn and ill habit of thinking, and make much work for retraction. *Subito* is carried away with title pages, so that he ventures to pronounce upon a large *octavo* at once, and to recommend it wonderfully when he had read half the Preface. Another volume of controversies of equal size, was discarded by him at once, because it pretended to treat of the *Trinity*, and yet
he

he could neither find the word *essence* nor *subsistencies* in the 12 first pages: but *Subito* changes his opinions of men and books and things so often, that nobody regards him.

As for those sciences, or those parts of knowledge, which either your profession, your leisure, your inclination, or your incapacity, forbid you to pursue with much application, or to search far into them, you must be contented with an *historical* and *superficial knowledge* of them, and not pretend to form many judgments of your own on those subjects which you understand very imperfectly.

IX. Once a day, especially in the early years of life and study, *call yourselves to an account what new ideas, what new proposition or truth you have gained, what further confirmation of known truths, and what advances you have made in any part of knowledge*; and let no day if possible pass away without some intellectual gain: such a course well pursued, must certainly advance us in useful knowledge. It is a wise proverb among the learned, borrowed from the lips and practice of a celebrated painter, *nulla dies sine lineâ*; let no day pass without one line at least: and it was a sacred rule among the *Pythagoreans*, that they should every evening thrice run over the actions and affairs of the day, and examine what their conduct hath been, what

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they

they had done, or what they have neglected; and they assured their pupils, that by this method they would make a noble progress in the path of virtue.

Μηδ' ὕπνον μαλακοῖσιν ἐπ' ὀφθαλμοῖς προσδιξασθαι
 Πρὶν τῶν ἡμερῶν ἔργων τρίς ἑκάστον ἐπελθεῖν.
 Πῶς παρεῖν; τί δ' ἐρεῖα; τί μοι δεῖν οὐκ ἐπέλεσθαι;
 Ταῦτα σε τῆς θεῆς ἀρετῆς εἰς ἰχνηά θήσει.

*Nor let soft slumber close your eyes
 Before you've recollected thrice
 The train of actions thro' the day:
 Where have my feet chose out the way?
 What have I learnt, where'er I've been,
 From all I've heard, from all I've seen?
 What know I more that's worth the know-
 ing?*

*What have I done that's worth the doing?
 What have I sought that I should shun?
 What duty have I left undone;
 Or into what new follies run?
 These self-enquiries are the road
 That leads to virtue and to God.*

I WOULD be glad among a nation of *Christians*, to find young men heartily engaged in the practice of what this *beatific* writer teaches.

X. MAINTAIN a constant watch
 times against a dogmatical spirit

your assent to any proposition in a firm and unalterable manner, till you have some firm and unalterable ground for it, and till you have arrived at some clear and sure evidence; till you have turned the proposition on all sides, and searched the matter through and through, so that you cannot be mistaken. And even where you may think you have full grounds of assurance, be not too early, nor too frequent in expressing this assurance in too peremptory and positive a manner, remembering that human nature is always liable to mistake in this corrupt and feeble state. A *dogmatical spirit* has many inconveniencies attending it: as,

1. *It stops the ear against all further reasoning* upon that subject, and shuts up the mind from all farther improvements of knowledge. If you have resolutely fixed your opinion, though it be upon too slight and insufficient grounds, yet you will stand determined to renounce the strongest reason brought for the contrary opinion, and grow obstinate against the force of the clearest argument. *Positivo* is a man of this character, and has often pronounced his assurance of the *Cartesian* vortexes: last year some further light broke in upon his understanding, with uncontrollable force, by reading something of mathematical philosophy; yet having asserted his former opinions in a most confident manner, he is tempted

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ed now to wink a little against the truth, or to prevaricate in his discourse upon that subject, lest by admitting conviction, he should expose himself to the necessity of confessing his former folly and mistake; and he has not humility enough for that.

2. A *dogmatical spirit* naturally leads us to *arrogance of mind*, and gives a man some airs in conversation, which are too haughty and assuming. *Audens* is a man of learning, and very good company, but his infallible assurance renders his carriage sometimes insupportable.

3. A *dogmatical spirit* inclines a man to be *censorious of his neighbours*. Every one of his opinions appears to him written as it were with sun-beams, and he grows angry that his neighbour does not see it in the same light. He is tempted to disdain his correspondents as men of a low and dark understanding, because they will not believe what he does. *Furio* goes farther in this wild track, and charges those who refuse his notions, with wilful obstinacy and vile hypocrisy; he tells them boldly, that they resist the truth, and sin against their consciences.

THESE are the men, that when they deal in controversy, delight in reproaches. They abound in tossing about *absurdity* and *stupidity* among their brethren: they cast the imputation of *heresy* and *nonsense* plenti-

plentifully upon their antagonists ; and in matters of sacred importance, they deal out their *anathemas* in abundance upon christians better than themselves ; they denounce damnation upon their neighbours without either justice or mercy, and when they pronounce sentences of divine wrath against supposed heretics, they add their own human fire and indignation. A dogmatist in religion is not a great way off from a bigot, and is in high danger of growing up to be a bloody persecutor.

XI. Though caution and slow assent will guard you against frequent mistakes and retractions, yet you should *get humility and courage enough to retract any mistake, and confess an error* : frequent changes are tokens of levity, in our first determinations ; yet you should never be too proud to change your opinion, nor frightened at the name of a *changeling*. Learn to scorn those vulgar *bugbears* which confirm foolish man in his own mistakes, for fear of being charged with inconstancy. I confess it is better not to judge, than to judge falsely ; and it is wiser to with-hold our assent till we see complete evidence ; but if we have too suddenly given our assent, as the wisest man does sometimes, if we have professed what we find afterwards to be false, we should never be ashamed nor afraid to renounce a mistake. That is a noble essay

that is found among the *Occasional Papers*, to encourage the world to practise *retractions*; and I would recommend it to the perusal of every scholar and every christian.

XII. HE that would raise his judgment above the vulgar rank of mankind, and learn to pass a just sentence on persons and things, must *take heed of a fanciful temper of mind, and a humorous conduct in his affairs*. Fancy and humour early and constantly indulged, may expect an old age over-run with follies.

THE notion of a *humourist* is, one that is greatly pleased or greatly displeased with little things, who sets his heart much upon matters of very small importance, who has his will determined every day by trifles, his actions seldom directed by the reason and nature of things, and his passions frequently raised by things of little moment. Where this practice is allowed, it will insensibly warp the judgment to pronounce little things great, and tempt you to lay a great weight upon them. In short, this temper will incline you to pass an unjust value on almost every thing that occurs; and every step that you take in this path is just so far out of the way to wisdom.

XIII. FOR the same reason *have a care of trifling with things important and momentous, or of sporting with things awful and sacred*:

sacred: do not indulge a spirit of ridicule, as some witty men do on all occasions and subjects. This will as unhappily bias the judgment on the other side, and incline you to pass a low esteem on the most valuable objects. Whatsoever evil habit we indulge in practice, it will insensibly obtain a power over our understanding, and betray us into many errors. *Jocander* is ready with his jest to answer every thing that he hears; he reads books in the same jovial humour, and has got the art of turning every thought and sentence into merriment. How many awkward and irregular judgments does this man pass upon solemn subjects, even when he designs to be grave and in earnest? his mirth and laughing humour is formed into habit and temper, and leads his understanding shamefully astray. You will see him wandering in pursuit of a gay flying feather, and he is drawn by a sort of *ignis fatuus* into bogs and mire almost every day of his life.

XIV. *EVER maintain a virtuous and pious frame of spirit*; for an indulgence of vicious inclinations debases the understanding, and perverts the judgment. *Whoredom and wine and new wine, take away the heart* and soul and reason of a man. Sensuality ruins the better faculties of the mind: an indulgence to appetite and passion enfeebles the powers of reason, it

makes the judgment weak and susceptible of every falsehood, and especially of such mistakes as have a tendency towards the gratification of the animal; and it warps the soul aside strangely from that steadfast honesty and integrity that necessarily belongs to the pursuit of truth. It is the virtuous man who is in a fair way to wisdom. *God gives to those that are good in his sight, wisdom, and knowledge, and joy, Eccl. ii. 26.*

PIETY towards God, as well as sobriety and virtue, are necessary qualifications to make a truly wise and judicious man. He that abandons religion must act in such a contradiction to his own conscience and best judgment, that he abuses and spoils the faculty itself. It is thus in the nature of things, and it is thus by the righteous judgment of God: even the pretended sages among the heathens, who did not like to retain God in their knowledge, they were given up to a reprobate mind, *eis unum adonimon*, an undistinguishing or injudicious mind, so that they judged inconsistently, and practised mere absurdities, *τα μη ανηκοντα*, Rom. i. 28.

AND it is the character of the slaves of *antichrist*, 2 Thess. ii. 10. &c. that those who receive not the love of the truth, were exposed to the power of diabolical sleights and lying wonders. When divine revelation shines and blazes in the face of men with glorious evidence, and they wink their eyes
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against it, the God of this world is suffered to blind them even in the most obvious, common, and sensible things. The great God of heaven for this cause, *sends them strong delusions that they should believe a lye*; and the nonsense of *transubstantiation* in the *popish world* is a most glaring accomplishment of this prophecy, beyond ever what could have been thought of or expected among creatures who pretend to reason.

XV. *WATCH against the pride of your own reason*, and a vain conceit of your own intellectual powers, with the neglect of divine aid and blessing. Presume not upon great attainments in knowledge by your own self-sufficiency: those who *trust to their own understanding* entirely, are pronounced *fools* in the word of God; and it is the wisest of men gives them this character, *he that trusteth in his own heart is a fool*, Prov. xxviii. 26. And the same divine writer advises us *to trust in the Lord with all our heart, and not to lean to our own understandings*, nor to be *wise in our own eyes*, Chap. iii. 5, 7.

THOSE who with a neglect of religion, and dependence on God, apply themselves to search out every article in the things of God by the mere dint of their own reason, have been suffered to run into wild excesses of foolery, and strange extravagance of
opinions.

opinions. Every one who pursues this vain course, and will not ask for the conduct of God in the study of religion, has just reason to fear he shall be left of God, and given up a prey to a thousand prejudices: that he shall be consigned over to the follies of his own heart, and pursue his own temporal and eternal ruin. And even in common studies, we should by humility and dependence engage the God of truth on our side.

XVI. OFFER up therefore your *daily requests to God the Father of lights*, that he would bless all your attempts and labours in reading, study and conversation. Think with yourself, how easily and how insensibly by one turn of thought he can lead you into a large scene of useful ideas: he can teach you to lay hold on a clue which may guide your thoughts with safety and ease through all the difficulties of an intricate subject. Think how easily the Author of your beings can direct your motions by his providence, so that the glance of an eye, or a word striking the ear, or a sudden turn of the fancy, shall conduct you to a train of happy sentiments. By his secret and supreme method of government he can draw you to read such a treatise, or to converse with such a person who may give you more light into some deep subject in an hour, than

than you could obtain by a month of your own solitary labour.

THINK with yourself, with how much ease the God of spirits can cast into your mind some useful suggestion, and give a happy turn to your now thoughts, or the thoughts of those with whom you converse, whence you may derive unspeakable light and satisfaction in a matter that has long puzzled and entangled you: he can shew you a *path which the vulture's eye has not seen*, and lead you by some unknown gate or portal, out of a wilderness and labyrinth of difficulties wherein you have been long wandering.

IMPLORE constantly his divine grace to point your inclination to proper studies, and to fix your heart there. He can keep off temptations on the right hand and on the left, both by the course of his providence, and by the secret and insensible intimations of his Spirit. He can guard your understanding from every evil influence of error, and secure you from the danger of evil books and men, which might otherwise have a fatal effect, and lead you into pernicious mistakes.

NOR let this sort of advice fall under the censure of the godless and prophane, as a mere piece of bigotry or enthusiasm derived from faith and the Bible: for the reasons which I have given to support this

pious practice of invoking the blessing of God on our studies, are derived from the light of nature as well as revelation. He that made our souls and is the Father of spirits, shall he not be supposed to have a most friendly influence towards the instruction and government of them? The Author of our rational powers can involve them in darkness when he pleases by a sudden distemper, or he can abandon them to wander into dark and foolish opinions when they are filled with a vain conceit of their own light. He expects to be acknowledged in the common affairs of life, and he does as certainly expect it in the superior operations of the mind, and in the search of knowledge and truth. The very *Greek* *beathens* by the light of reason were taught to say, *Εκ Διὸς ἀρχομεσθα*, and the *Latins*, *A Jove principium, musæ*. In the works of learning they thought it necessary to begin with God. Even the poets call upon the *musæ* as a goddess to assist them in their compositions.

THE first lines of *Homer* in his *Iliad* and his *Odyssæy*, the first line of *Musæus* in his song of *Hero* and *Leander*, the beginning of *Hesiod* in his poem of *Works and Days*, and several others, furnish us with sufficient examples of this kind; nor does *Ovid* leave out this piece of devotion as he begins his stories of the *Metamorphosis*. *Christianity* is
much

much the more obliges us by the precepts of Scripture to invoke the assistance of the true God in all our labours of the mind, for the improvement of ourselves and others. Bishop *Saunderson* says, that *study without prayer is atheism*, as well as that *prayer without study is presumption*. And we are still more abundantly encouraged by the testimony of those who have acknowledged from their own experience, that sincere prayer was no hindrance to their studies: they have gotten more knowledge sometimes upon their knees, than by their labour in perusing a variety of authors; and they have left this observation for such as follow, *Bene orâsse est bene studuisse*. Praying is the best studying.

To conclude, let industry and devotion join together, and you need not doubt the happy success, *Prov. ii. 2. Incline thine ear to wisdom, apply thine heart to understanding: cry after knowledge, and lift up thy voice; seek her as silver, and search for her as for hidden treasures; then shalt thou understand the fear of the Lord, &c.* which is the beginning of wisdom. *It is the Lord who gives wisdom even to the simple, and out of his mouth cometh knowledge and understanding.*

C H A P. II.

*Observation, Reading, Instruction by Lectures,
Conversation, and Study compared.*

THERE are five eminent means or methods whereby the mind is improved in the knowledge of things, and these are *observation, reading, instruction by lectures, conversation, and meditation*; which last in a most peculiar manner is called *study*.

LET us survey the general definitions or descriptions of them all.

I. *OBSERVATION* is the notice that we take of all occurrences in human life, whether they are sensible or intellectual, whether relating to persons or things, to ourselves or others. It is this that furnishes us even from our infancy, with a rich variety of ideas and propositions, words and phrases: it is by this we know that *fire will burn*, that *the sun gives light*, that *a horse eats grass*, that *an acorn produces an oak*, that *man is a being capable of reasoning and discourse*, that *our judgment is weak*, that *our mistakes are many*, that *our sorrows are great*, that *our bodies die and are carried to the grave*, and that *one generation succeeds another*. All those things which we see, which we hear

or

or feel, which we perceive by sense or consciousness, or which we know in a direct manner, with scarcely any exercise of our reflecting faculties or our reasoning powers, may be included under the general name of *observation*.

WHEN this *observation* relates to any thing that immediately concerns ourselves, and of which we are conscious, it may be called *experience*. So I am said to know or experience, that *I have in myself a power of thinking, fearing, loving, &c.* that *I have appetites and passions* working in me, and *many personal occurrences* have attended me in this life.

Observation therefore includes all that Mr. Locke means by *sensation* and *reflection*.

WHEN we are searching out the nature or properties of any being, by various methods of trial; or when we apply some active powers or set some causes at work, to *observe* what effects they would produce, this sort of *observation* is called *experiment*. So when I throw a *bullet into water*, I find it *sinks*: and when I throw the same *bullet into quicksilver*, I see it *swims*: but if I beat out *this bullet into a thin hollow shape* like a dish, then it will *swim in the water* too. So when I strike two flints together, I find they produce fire: when I throw a *seed into the earth*, it *grows up into a plant*.

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ALL these belong to the first method of knowledge, which I call *observation*.

II. *READING* is that means or method of knowledge, whereby we *acquaint ourselves with what other men have written or published to the world in their writings*. These arts of *reading* and *writing* are of infinite advantage; for by them we are made partakers of the sentiments, observations, reasonings, and improvements of all the learned world, in the most remote nations, and in former ages, almost from the beginning of mankind.

III. *PUBLIC* or *private lectures*, are such *verbal instructions as are given by a teacher while the learners attend in silence*. This is the way of learning *religion* from the pulpit, or of *philosophy* or *theology* from the professor's chair, or of *mathematics* by a teacher shewing us various theorems or problems, *i. e.* speculations or practices, by demonstration and operation, with all the instruments of art necessary to those operations.

IV. *CONVERSATION* is another method of improving our minds, wherein *by mutual discourse and enquiry, we learn the sentiments of others, as well as communicate our sentiments to others in the same manner*. Sometimes indeed, though both parties speak by turns, yet the advantage is only on one side; as, when a *teacher* and a *learner*
meet

meet and discourse together: but frequently the profit is mutual. Under this head of *conversation*, we may also rank *disputes* of various kinds.

V. *MEDITATION* or *study* includes all those *exercises of the mind whereby we render all the former methods useful for our increase in true knowledge and wisdom*. It is by *meditation* we come to confirm our memory of things that pass through our thoughts in the occurrences of life, in our own experiences, and in the observations we make: it is by meditation that we draw various inferences, and establish in our minds general principles of knowledge. It is by *meditation* that we compare the various ideas which we derive from our senses, or from the operations of our souls, and join them in propositions. It is by *meditation* that we fix in our memory whatsoever we learn, and form our own judgment of the truth or falshood, the strength or weakness of what others speak or write. It is *meditation* or study that draws out long chains of argument, and searches and finds deep and difficult truths, which before lay concealed in darkness.

It would be a needless thing to prove that our own solitary *meditations*, together with the few *observations* that the most part of mankind are capable of making, are not sufficient of themselves to lead us into the

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attainment of any considerable proportion of knowledge, at least in an age so much improved as ours is, without the assistance of *conversation* and *reading*, and other *proper instructions* that are to be attained in our days. Yet each of these five methods have their *peculiar advantages*, whereby they assist each other; and their *peculiar defects*, which have need to be supplied by the others assistance. Let us trace over some of the particular *advantages* of each.

I. ONE method of improving the mind is *observation*, and the *advantages* of it are these.

1. It is owing to *observation* that our mind is furnished with the first, simple and complex ideas. It is this lays the ground-work and foundation of all knowledge, and makes us capable of using any of the other methods for improving the mind: for if we did not attain a variety of sensible and intellectual ideas by the *sensation* of outward objects, by the *consciousness* of our own appetites and passions, pleasures and pains, and by inward *experience* of the actings of our own spirits, it would be impossible either for men or books to teach us any thing. It is observation that must give us our first ideas of things, as it includes in it *sense* and *consciousness*.

2. ALL our knowledge derived from *observation*, whether it be of single ideas or
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of propositions, is *knowledge gotten at first hand*. Hereby we see and know things as they are, or as they appear to us; we take the impressions of them on our minds from the original objects themselves, which give a clearer and stronger conception of things: these ideas are more lively, and the propositions (at least in many cases) are much more evident. Whereas what knowledge we derive from *lectures, reading, and conversation*, is but the copy of other men's ideas, that is, the picture of a picture; and it is one remove further from the original.

3. ANOTHER *advantage of observation* is, that we may *gain knowledge all the day long*, and every moment of our lives, and every moment of our existence we may be adding something to our intellectual treasures thereby, except only while we are asleep; and even then the remembrance of our dreamings will teach us some truths, and lay a foundation for a better acquaintance with human nature, both in the powers and in the frailties of it.

II. THE next way of improving the mind is by *reading*, and the *advantages of it* are such as these.

I. By *reading* we acquaint ourselves in a very extensive manner *with the affairs, actions and thoughts of the living and the dead*, in the *most remote nations and in most distant ages*; and that with as much ease

as though they lived in our own age and nation. By *reading* of books we may learn something from *all parts of mankind*; whereas by *observation* we learn all from ourselves, and only what comes within our own direct cognizance; by *conversation* we can only enjoy the assistance of a *very few persons*, viz. those who are near us, and live at the same time when we do, that is, our *neighbours* and *contemporaries*: but our knowledge is much more narrowed still, if we confine ourselves merely to our own solitary reasonings, without much observation or reading: for then all our improvement must arise only from our own inward powers and meditations.

2. By *reading* we learn not only the actions and the sentiments of distant nations and ages, but we transfer to ourselves the knowledge and improvements of the *most learned men, the wisest and the best of mankind*, when or wheresoever they lived: for though many books have been written by weak and injudicious persons, yet the most of those books which have obtained great reputation in the world, are the products of great and wise men in their several ages and nations: whereas we can obtain the *conversation* and *instruction* of those only who are within the reach of our dwelling, or our acquaintance, whether they are wise or unwise; and sometimes that narrow
sphere

sphere scarcely affords any person of great eminence in wisdom or learning, unless our *instructor* happen to have this character. And as for our own *study* and *meditations*, even when we arrive at some good degrees of learning, our advantage for further improvement in knowledge by them, is still far more contracted than what we may derive from *reading*.

3. WHEN we read good authors we learn the best, the most laboured and most refined sentiments even of those wise and learned men; for they have studied hard, and have committed to writing their maturest thoughts, and the result of their long *study* and *experience*: whereas by *conversation*, and in some *lectures*, we obtain many times only the present thoughts of our *tutors* or *friends*, which (though they may be bright and useful) yet, at first perhaps, may be sudden and indigested, and are mere hints which have risen to no maturity.

4. IT is another advantage of *reading*, that we may review what we have read; we may consult the page again and again, and meditate on it at successive seasons in our sereneest and retired hours, having the book always at hand: but what we obtain by *conversation* and in *lectures*, is oftentimes lost again as soon as the company breaks up, or at least when the day vanishes; unless we happen to have the talent of a good

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memory,

memory, or quickly retire and note down what *remarkables* we have found in those discourses. And for the same reason, and for want of retiring and writing, many a learned man has lost several useful meditations of his own, and could never recal them again.

III. THE advantages of *verbal instructions by public or private lectures* are these.

1. THERE is something *more sprightly, more delightful and entertaining* in the living discourse of a wise, a learned, and well-qualified teacher, than there is in the silent and sedentary practice of reading. The very turn of voice, the good pronunciation, and the polite and alluring manner which some teachers have attained, will engage the attention, keep the soul fixed, and convey and insinuate into the mind, the ideas of things in a more lively and forcible way, than the *mere reading of books* in the silence and retirement of the closet.

2. A tutor or instructor, when he paraphrases and explains other authors, can *mark out the precise point of difficulty or controversy*, and unfold it. He can shew you which paragraphs are of greatest importance, and which are of less moment. He can teach his hearers what authors, or what parts of an author, are best worth reading on any particular subject; and thus
save

save his disciples much time and pains, by shortening the labours of their closet and private studies. He can shew you what were the doctrines of the *antients* in a *compendium*, which perhaps would cost much labour and the perusal of many books to attain. He can inform you what new doctrines or sentiments are rising in the world, before they come to be public; as well as acquaint you with his own private thoughts, and his own experiments and observations; which never were, and perhaps never will be published to the world, and yet may be very valuable and useful.

3. A LIVING instructor *can convey to our senses those notions with which he would furnish our minds, when he teaches us natural philosophy, or most parts of mathematical learning.* He can make the *experiments* before our eyes. He can describe *figures* and *diagrams*, point to the *lines* and *angles*, and make out the *demonstration* in a more intelligible manner by sensible means, which cannot be done so well by mere reading, even though we should have the same figures lying in a book before our eyes. A living teacher therefore, is a most necessary help in these studies.

I MIGHT add also, that even where the subject of discourse is *moral, logical* or *rhctorical*, &c. and which does not directly come under the notice of our senses, a

tutor may explain his ideas by such familiar examples, and plain or simple similitudes, as seldom find place in books and writings.

4. WHEN an instructor in his lectures delivers any matter of difficulty, or expresses himself in such a manner as seems obscure, so that you do not take up his ideas clearly or fully, *you have opportunity*, at least when the lecture is finished, or at other proper seasons, to *enquire how such a sentence should be understood, or how such a difficulty may be explained and removed.*

IF there be permission given to free converse with the tutor, either in the midst of the lecture, or rather at the end of it, concerning any doubts or difficulties that occur to the hearer, this brings it very near to *conversation or discourse.*

IV. *CONVERSATION* is the next method of improvement, and it is attended with the following *advantages.*

1. WHEN we *converse* familiarly with a learned friend, *we have his own help at hand to explain to us every word and sentiment that seems obscure* in his discourse, and to inform us of his whole meaning, so that we are in much less danger of mistaking his sense; whereas in *books*, whatsoever is really obscure, may also abide always obscure without remedy, since the author is not at hand, that we may enquire his sense.

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IF we mistake the meaning of our friend in *conversation*, we are quickly set right again ; but in *reading* we many times go on in the same mistake, and are not capable of recovering ourselves from it. Thence it comes to pass, that we have so many contests in all ages about the *meaning of ancient authors*, and especially the *sacred writers*. Happy should we be, could we but converse with *Moses, Isaiab, and St. Paul*, and consult the prophets and apostles, when we meet with a difficult text ? But that glorious conversation is reserved for the ages of future blessedness.

2. WHEN we are *discoursing* upon any theme with a friend, *we may propose our doubts and objections against his sentiments, and have them solved and answered at once.*—The difficulties that arise in our minds, may be removed by one enlightening word of our *correspondent* ; whereas in *reading*, if a difficulty or question arise in our thoughts which the author has not happened to mention, we must be content without a present answer or solution of it. Books cannot speak.

3. NOT only the doubts which arise in the mind upon any subject of discourse, are easily proposed and solved in *conversation*, but the very *difficulties we meet with in books and in our private studies*, may find a relief by *friendly conference*. We may pore upon a knotty point in solitary meditation

tation many months without a solution, because perhaps we have gotten into a wrong tract of thought; and our labour (while we are pursuing a false scent) is not only useless and unsuccessful, but it leads us perhaps into a train of error for want of being corrected in the first step. But if we note down this difficulty when we read it, we may propose it to an ingenious *correspondent* when we see him; we may be relieved in a moment, and find the difficulty vanish: he beholds the object perhaps in a different view, sets it before us in quite another light, and leads us at once into evidence and truth, and that with a delightful surprise.

4. *CONVERSATION* calls out into light what has been lodged in all the recesses and secret chambers of the soul: by occasional hints and incidents, it brings old useful notions into remembrance; it unfolds and displays the hidden treasures of knowledge with which *reading, observation and study* had before furnished the mind. By mutual discourse the soul is awakened and allured to bring forth its hoards of knowledge, and it learns how to render them most useful to mankind. A man of vast reading without conversation, is like a *miser* who lives only to himself.

5. In free and friendly *conversation* our intellectual powers are more animated, and our spirits act with a superior vigour in the quest

quest and pursuit of unknown truths. There is a sharpness and sagacity of truth that attends *conversation*, beyond what we find whilst we are shut up reading and musing in our retirements. Our souls may be *serene* in solitude, but not *sparkling*, though perhaps we are employed in reading the works of the brightest writers. Often has it happened in *free discourse*, that new thoughts are strangely struck out, and the seeds of truth sparkle and blaze through the company, which in calm and silent reading would never have been excited. By *conversation* you will both give and receive this benefit; as *flints* when put into motion and striking against each other, produce living fire on both sides, which would never have risen from the same hard materials in a state of rest.

6. IN generous *conversation*, amongst ingenious and learned men, we have a great advantage of proposing our private opinions, and of *bringing our own sentiments to the test*, and learning in a more compendious and a safer way what the world will judge of them, how mankind will receive them, what objections may be raised against them, what defects there are in our scheme, and how to correct our own mistakes; which advantages are not so easy to be obtained by our own private *meditations*: for the pleasure we take in our own notions, and the

the *passion of self-love*, as well as the *narrowness of our own views*, tempt us to pass too favourable an opinion on our own schemes; whereas the variety of *genius* in our several associates, will give happy notices how our opinion will stand in the view of mankind.

7. It is also another considerable advantage of *conversation*, that it furnishes the student with the *knowledge of men* and the affairs of life, as *reading* furnishes him with *book-learning*. A man who dwells all his days among books, may have amassed together a vast heap of notions, but he may be a *mere scholar*, which is a contemptible sort of character in the world. A hermit who has been shut up in his cell in a college, has contracted a sort of mould and rust upon his soul, and all his airs of behaviour have a certain awkwardness in them; but these awkward airs are worn away by degrees in company: the rust and the mould are filed and brushed off by polite conversation. The *scholar* now becomes a *citizen* or a *gentleman*, a *neighbour* and a *friend*; he learns how to dress his sentiments in the fairest colours, as well as to set them in the strongest light. Thus he brings out his notions with honour, he makes some use of them in the world, and improves the theory by the practice,

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BUT before we proceed too far in finishing a bright character by *conversation*, we should consider that something else is necessary besides an *acquaintance with men and books*: and therefore, I add,

V. MERE *lectures, reading, and conversation*, without *thinking*, are not sufficient to make a man of knowledge and wisdom. It is our own *thought and reflection, study and meditation*, must attend all the other methods of improvement, and perfect them. It carries these advantages with it:

I. THOUGH *observation and instruction, reading and conversation* may furnish us with many ideas of men and things, yet it is *our own meditation* and the labour of our own *thoughts*, that must form our judgment of things. Our own thoughts should join or disjoin these ideas in a proposition for ourselves: it is our own mind that *must judge for ourselves concerning* the agreement or disagreement of ideas, and form propositions of truth out of them. *Reading and conversation* may acquaint us with many *truths* and with many arguments to support them, but it is our own *study and reasoning* that must determine whether these propositions are true, and whether these arguments are just and solid.

IT is confess'd there are a thousand things which our eyes have not seen, and which would

would never come within the reach of our personal and immediate *knowledge* and *observation*, because of the distance of times and places : these must be known by consulting other persons ; and that is done either in their *writings* or in their *discourses*. But after all, let this be a fixed point with us, that it is our own *reflection* and *judgment* must determine how far we should receive that which books or men inform us of, and how far they are worthy of our assent and credit.

2. It is *meditation* and *study* that *transfers and conveys the notions and sentiments of others to ourselves*, so as to make them properly our own. It is our own *judgment* upon them as well as our *memory* of them, that makes them become *our own property*. It does as it were conduct our intellectual food, and turns it into a part of *ourselves*: just as a man may call his limbs and his flesh *his own*, whether he borrowed the materials from the ox or the sheep, from the lark or the lobster ; whether he derived it from corn or milk, the fruits of the trees, or the herbs and roots of the earth ; it is all now become one substance with himself, and he wields and manages those muscles and limbs for his own proper purposes, which once were the substance of other animals or vegetables ; that very substance which last week was grazing in
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the field or swimming in the sea, waving in the milk-pail or growing in the garden, is now become part of the man.

3. BY *study and meditation*, we improve *the hints* that we have acquired by *observation, conversation and reading*; we take more time in thinking, and by the labour of the mind we penetrate deeper into themes of knowledge, and carry our thoughts sometimes much farther on many subjects, than we ever met with either in *the books* of the dead or *discourses* of the living. It is our own *reasoning* that draws out one truth from another, and forms a whole scheme of science from a few hints which we borrowed elsewhere.

By a survey of these things we may justly conclude, that he who spends all his time in *hearing lectures*, or *poring upon books*, *without observation, meditation or converse*, will have but a mere *historical knowledge of learning*, and be able only to tell what others have known or said on the subject: he that lets all his time flow away in *conversation, without due observation, reading, or study*, will gain but a slight and superficial knowledge, which will be in danger of vanishing with the voice of the speaker: and he that confines himself merely to his closet and his own *narrow observation* of things, and is taught only by his own *solitary thoughts, without in-*
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struction by lectures, reading, or free conversation, will be in danger of a narrow spirit, a vain conceit of himself, and an unreasonable contempt of others ; and after all, he will obtain but a very limited and imperfect view and knowledge of *things*, and he will seldom learn how to make that knowledge useful.

THESE *five methods of improvement* should be pursued jointly, and go hand in hand, where our circumstances are so happy as to find opportunity and conveniency to enjoy them all : though I must give my opinion, that two of them, *reading and meditation*, should employ much more of our time than public *lectures or conversation* and discourse. As for *observation* we may be always acquiring knowledge that way, whether we are alone or in company.

BUT it will be for our further improvement, if we will go over all these *five methods* of obtaining knowledge more distinctly, and more at large, and see what special advances in useful science we may draw from them all.

C H A P. III.

Rules relating to OBSERVATION.

THOUGH *observation* in the strict sense of the word, and as it is distinguished from *meditation* and *study*, is the first means of our improvement, and in its strictest sense does not include in it any *reasonings* of the mind upon the things which we *observe*, or *inferences* drawn from them; yet the motions of the mind are so exceeding swift, that it is hardly possible for a thinking man to gain *experiences* or *observations*, without making some secret and short *reflections* upon them: and therefore in giving a few *directions* concerning this method of improvement, I shall not so narrowly confine myself to the *first mere impression of objects on the mind by observation*; but include also some hints which relate to the first, most easy, and obvious *reflections* or *reasonings* which arise from them.

I. LET *the enlargement of your knowledge be one constant view and design in life; since there is no time or place, no transactions, occurrences or engagements in life, which exclude us from this method of improving the mind.* When we are *alone*, even in darkness and silence, we may converse with our own hearts, observe the working
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of our own spirits, and reflect upon the inward motions of our own passions in some of the latest occurrences in life ; we may acquaint ourselves with the powers and properties, the tendencies and inclinations both of body and spirit, and gain a more intimate *knowledge of ourselves*. When we are in *company*, we may discover something more of human nature, of human passions and follies, and of human affairs, vices and virtues, by conversing with mankind, and observing their conduct: Nor is there any thing more valuable than the *knowledge of ourselves, and the knowledge of men*, except it be the *knowledge of God* who made us, and our relation to him as our governor.

WHEN we are in the *house* or the *city*, wheresoever we turn our eyes, we see the *works of men* ; when we are *abroad in the country*, we behold more of the *works of God*. The skies and the ground above and beneath us, and the animal and vegetable world round about us, may entertain our observation with ten thousand varieties.

ENDEAVOUR therefore to *derive some instruction or improvement of the mind from every thing which you see or hear, from every thing which occurs in human life, from every thing within you or without you*.

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FETCH down some knowledge from the clouds, the stars, the sun, the moon, and the revolution of all the planets : dig and draw up some valuable meditations from the depths of the earth, and search them through the vast oceans of water : extract some intellectual improvements from the minerals and metals ; from the wonders of nature among the vegetables, the herbs, trees, and flowers. Learn some lessons from the birds, and the beasts, and the meanest insect. Read the wisdom of God and his admirable contrivance in them all. Read his almighty power, his rich and various goodness in all the works of his hands.

FROM the day and the night, the hours and the flying minutes, learn a wise improvement of time, and be watchful to seize every opportunity to increase in knowledge.

FROM the vicissitudes and revolutions of nations and families, and from the various occurrences of the world, learn the instability of mortal affairs, the uncertainty of life, the certainty of death. From a coffin and a funeral, learn to meditate upon your own departure.

FROM the vices and follies of others, observe what is hateful in them ; consider how such a practice looks in another person, and remember that it looks as ill or

worse in yourself. From the *virtues of others*, learn something worthy of your imitation.

FROM the *deformity*, the *distress*, or *calamity* of others, derive lessons of thankfulness to God, and hymns of grateful praise to your Creator, governor and benefactor, who has formed you in a better mould, and guarded you from those evils. Learn also the sacred lesson of contentment in your own estate, and compassion to your neighbour under his miseries.

FROM your *natural powers*, *sensations*, *judgment*, *memory*, *hands*, *feet*, &c. make this inference, that they were not given you for nothing, but for some useful employment to the honour of your Maker, and for the good of your fellow-creatures, as well as for your own best interest and final happiness.

FROM the *sorrows*, the *pains*, the *sicknesses* and *sufferings* that attend you, learn the evil of sin, and the imperfection of your present state. From *your own sins* and *follies*, learn the patience of God toward you, and the practice of humility toward God and men.

THUS from every appearance in nature, and from every occurrence of life, you may derive *natural*, *moral*, and *religious observations* to entertain your minds, as well as *rules of conduct* in the affairs relating to this life, and that which is to come.

II. IN order to furnish the mind with a rich variety of ideas, the *laudable curiosity of young people should be indulged and gratified rather than discouraged.* It is a very hopeful sign in young persons, to see them curious in observing, and inquisitive in searching into the greatest part of things that occur ; nor should such an enquiring temper be frowned into silence, nor be rigorously restrained, but should rather be satisfied by proper answers given to all those queries.

FOR this reason also, where time and fortune allows it, young people should be led into company at proper seasons, should be carried abroad to see the fields, and the woods, and the rivers, the buildings, towns and cities distant from their own dwelling ; they should be entertained with the sight of strange birds, beasts, fishes, insects, vegetables, and productions both of nature and art of every kind, whether they are the products of their own or foreign nations : and in due time, where providence gives opportunity, they may travel under a wise inspector or tutor to different parts of the world for the same end, that they may bring home treasures of useful knowledge.

III. A M O N G all these observations, *write down what is more remarkable and uncommon :* reserve these remarks in store

for proper occasions, and at proper seasons take a review of them. Such a practice will give you a *habit of useful thinking*: this will secure the workings of your soul from running to waste, and by this means even your looser moments will turn to happy account both here and hereafter.

AND whatever useful observations have been made, let them be at least some part of the subject of your conversation among your friends at next meeting.

LET the circumstances or situations of life be what or where they will, a man should never neglect this improvement which may be derived from *observation*. Let him travel into the *East* or *West Indies*, and fulfil the duties of the military or the mercantile life there: let him rove through the earth or the seas for his own humour as a traveller, or pursue his diversions in what part of the world he please as a gentleman; let prosperous or adverse fortune call him to the most distant parts of the globe; still let him carry on his knowledge and the improvement of his soul by wise *observations*. In due time, by this means he may render himself some way useful to the societies of mankind.

THEOBALDINO in his younger years, visited the forests of *Norway* on the account of trade and timber, and besides his proper observations of the growth of trees
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on those *northern* mountains, he learnt there was a sort of people called *Finnes* in those confines which border upon *Sweden*, whose habitation is in the woods: and he lived afterwards to give a good account of them, and some of their customs, to the Royal Society for the improvement of natural knowledge. *PUTEOLI* was taken captive into *Turkey* in his youth, and travelled with his master in their holy pilgrimage to *Mecca*, whereby he became more intelligent in the forms, ceremonies, and foole-ries of the *Mahometan* worship, than perhaps ever any *Briton* knew before; and by his manuscripts, we are more acquainted in this last century with the *Turkish* sacreds than any one had ever informed us.

IV. LET us keep our minds as free as possible from passions and prejudices, for these will give a wrong turn to our observations both on persons and things. The eyes of a man in the *jaundice*, make *yellow* observations on every thing; and the soul tinged with any *passion or prejudice*, diffuses a false colour over the real appearances of things, and disguises many of the common occurrences of life: it never beholds things in a true light, nor suffers them to appear as they are. Whensoever therefore, you would make *proper observations*, let *self* with all its influences stand aside as far as possible; abstract your own interest and your

own concern from them, and bid all friendships and enmities stand aloof and keep out of the way, in the observations that you make relating to persons and things.

IF this rule were well obeyed, we should be much better guarded against those common pieces of misconduct in the observations of men, *viz.* the false judgments of *pride* and *envy*. How ready is *envy* to mingle with the notices which we take of other persons? How often is mankind prone to put an ill sense upon the actions of their neighbours, to take a survey of them in an evil position, and in an unhappy light? And by this means, we form a worse opinion of our neighbours than they deserve; while at the same time, *pride* and *self-flattery* tempt us to make unjust observations on ourselves in our own favour. In all the favourable judgments we pass concerning ourselves, we should allow a little abatement on this account.

V. IN making your *observations on persons*, take care of indulging that busy curiosity which is ever enquiring into *private* and *domestic affairs*, with an endless itch of learning the secret history of families. It is but seldom that such a prying curiosity attains any valuable ends; it often begets suspicions, jealousies and disturbances in households, and it is a frequent temptation to persons to defame their neighbours. Some persons

persons cannot help telling what they know; a *busy body* is most liable to become a *tatler* upon every occasion.

VI. LET your *observation even of persons and their conduct*, be chiefly designed in order to lead you to a better acquaintance with *things*, particularly with *human nature*; and to inform you what to imitate and what to avoid, rather than to furnish out matter for the evil passions of the mind, or the impertinencies of discourse, and reproaches of the tongue.

VII. THOUGH it may be proper sometimes to make your *observations concerning* persons as well as things, the subject of your discourse in learned or useful conversation; yet what remarks you make on particular persons, especially to their disadvantage, should for the most part lie hid in your own breast, till some just and apparent occasion, some necessary call of providence lead you to speak them.

IF the character or conduct which you observe, be greatly culpable, it should so much the less be published. You may treasure up such remarks of the follies, indecencies, or vices of your neighbours, as may be a constant guard against your practice of the same, without exposing the reputation of your neighbour on that account. It is a good old rule, that *our conversation should rather be laid out on things than*

than on persons; and this rule should generally be observed, unless names be concealed, wheresoever the faults or follies of mankind are our present theme.

OUR late archbishop *Tillotson* has written a small but excellent discourse on *evil speaking*, wherein he admirably explains, limits and applies that general apostolic precept, *Speak evil of no man*. Tit. iii. 2.

VIII. *BE not too hasty to erect general theories from a few particular observations, appearances or experiments.* This is what the *logicians* call a *false induction*. When general observations are drawn from so many particulars as to become certain and indubitable, these are jewels of knowledge comprehending great treasure in a little room; but they are therefore to be made with the greater care and caution, lest errors become large and diffusive, if we should mistake in these *general notions*.

A HASTY determination of some universal principles, without a due survey of all the particular cases which may be included in them, is the way to lay a trap for our own understandings in their pursuit of any subject, and we shall often be taken captives into mistake and falsehood. *Niveo* in his youth observed, that on three *Christmas-days* together there fell a good quantity of snow, and now he hath writ it down in his almanack as part of his wise remarks on
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the weather, that it will always snow at *Christmas*. *Euron* a young lad, took notice ten times that there was a sharp frost when the wind was in the *north-east*, therefore in the middle of last *July* he almost expected it should freeze, because the weather-cocks shewed him a *north-east* wind : and he was still more disappointed, when he found it a very sultry season. It is the same hasty judgment, that hath thrown scandal on a whole nation for the sake of some culpable characters belonging to several particular natives of that country ; whereas all the *Frenchmen* are not gay and airy ; all the *Italians* are not jealous and revengeful ; nor all the *English* over-run with the spleen.

C H A P. IV.

Of READING *and* BOOKS.

I. **T**HE world is full of books, but there are multitudes which are so ill written they were never worthy any man's reading ; and there are thousands more which may be good in their kind, yet are worth nothing when the month or year, or occasion is past for which they were written. Others may be valuable in themselves, for some special purpose or in some peculiar science, but are not fit to be perused by any but those who are engaged in that particular science or business. To what use is it for a *divine* or *physician*, or a *tradesman*, to read over the huge volumes of *reports of judged cases in the law* ? or for a lawyer to learn *Hebrew* and read the *Rabbins* ? It is of vast advantage for improvement of knowledge and saving time, for a young man to have the most proper books for his reading recommended by a judicious friend.

II. *BOOKS* of importance of any kind, and especially *complete treatises* on any subject, should be first read in a more general and cursory manner, to learn a little what the treatise promises, and what you may expect

expect from the writer's manner and skill. And for this end I would advise always that the *preface* be read, and a survey taken of the *table of contents*, if there be one, before this first survey of the book. By this means you will not only be better fitted to give the book the first reading, but you will be much assisted in your second perusal of it, which should be done with greater attention and deliberation, and you will learn with more ease and readiness what the author pretends to teach. In your reading, *mark* what is new or unknown to you before, and review those chapters, pages or paragraphs. Unless a reader has an uncommon and most retentive memory, I may venture to affirm, that there is scarcely any book or chapter worth reading once, that is not worthy of a second perusal. At least take a careful review of all the lines or paragraphs which you *marked*, and make a recollection of the sections which you thought truly valuable.

THERE is another reason also why I would chuse to take a superficial and cursory survey of a book, before I sit down to read it, and dwell upon it with studious attention; and that is, there may be several difficulties in it which we cannot easily understand and conquer at the first reading, for want of a fuller comprehension of the author's whole scheme. And
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therefore in such treatises we should not stay till we master *every difficulty* at the first perusal; for perhaps, many of these would appear to be solved when we have proceeded farther in that book, or would vanish of themselves upon a *second reading*.

WHAT we cannot reach and penetrate at first, may be noted down as matter of after consideration and enquiry, if the pages that follow do not happen to strike a complete light on those which went before.

III. *If three or four persons agree to read the same book*, and each bring his own remarks upon it at some set hours appointed for conversation, and they communicate mutually their sentiments on the subject, and debate about it in a friendly manner, this practice will render the reading any author more abundantly beneficial to every one of them.

IV. *If several persons engaged in the same study, take into their hands distinct treatises on one subject*, and appoint a season of communication once a week, they may inform each other in a brief manner concerning the sense, sentiments and method of those several authors, and thereby promote each others improvement, either by recommending the perusal of the same book to their companions, or perhaps by satisfying their enquiries concerning it by conversation, without every ones perusing it.

V. REMEMBER that your business in *reading* or in *conversation*, especially on subjects of natural, moral, or divine science, is not merely to know the opinion of the author or speaker, for this is but the mere knowledge of history; but your chief business is to consider whether their opinions are right or no, and to improve your own solid knowledge of that subject by meditation on the themes of their writing or discourse. Deal freely with every author you read, and yield up your assent only to evidence and just reasoning on the subject.

HERE I would be understood to speak only of human authors, and not of the sacred and inspired writings. In these, our business indeed is only to find out the sense, and understand the true meaning of the paragraph and page, and our assent then is bound to follow, when we are before satisfied that the writing is divine. Yet I might add also, that even this is just reasoning, and this is sufficient evidence to demand our assent.

BUT in the compositions of men, remember you are a man as well as they; and it is not their reason but your own, that is given to guide you when you arrive at years of discretion, of manly age and judgment.

VI. LET this therefore be your practice, especially after you have gone through
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one course of any science in your academical studies; if a writer on that subject maintains the same sentiments as you do, yet if he does *not explain* his ideas or *prove* his positions well, mark the faults or defects, and endeavour to do it better, either in the margin of your book, or rather in some papers of your own, or at least let it be done in your private meditations. As for instance:

WHERE the author is *obscure*, enlighten him: where he is *imperfect*, supply his deficiencies: where he is *too brief* and *concise*, amplify a little, and set his notions in a fairer view: where he is *redundant*, mark those paragraphs to be retrenched: when he *trifles* and *grows impertinent*, abandon those passages or pages: where he *argues*, observe whether his reasons be conclusive: if the conclusion be true, and yet the *argument weak*, endeavour to confirm it by better proofs: where he *derives* or *infers* any propositions *darkly* or *doubtfully*, make the justice of the inferences appear, and add further inferences or corollaries, if such occur to your mind: where you suppose he is *in a mistake*, propose your objections and correct his sentiments: what he *writes so well as to approve itself* to your judgment both as just and useful, treasure it up in your memory, and count it a part of your intellectual gains.

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Note, MANY of these same directions which I have now given, may be practised with regard to *conversation*, as well as *reading*, in order to render it useful in the most extensive and lasting manner.

VII. OTHER things also of the like nature may be usefully practised with regard to the authors which you read, *viz.* If the *method* of a book be *irregular*, reduce it into form by a little analysis of your own, or by hints in the margin: if those things are *heaped together* which should be separated, you may wisely distinguish and divide them. If several things relating to the same subject *are scattered up and down separately* through the treatise, you may bring them all to one view by references; or if the matter of a book be *really valuable and deserving*, you may throw it into a better method, reduce it to a more logical scheme, or abridge it into a lesser form; all these practices will have a tendency both to advance your skill in *logic* and method, to improve your judgment in general, and to give you a fuller survey of that subject in particular. When you have finished the treatise with all your observations upon it, recollect and determine what real improvements you have made by reading that author.

VIII. IF a book has no *index* to it, or *good table of contents*, it is very useful to

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make one as you are reading it: not with that exactness as to include the sense of every page and paragraph, which should be done if you designed to print it; but it is sufficient in your *Index* to take notice only of those parts of the book which are new to you, or which you think well written, and well worthy of your remembrance or review.

SHALL I be so free as to assure my younger friends, from my own experience, that these methods of reading will cost some pains in the first years of your study, and especially in the first authors which you peruse in any science, or on any particular subject: but the profit will richly compensate the pains. And in the following years of life, after you have read a few valuable books on any special subject in this manner, it will be very easy to read others of the same kind, because you will not usually find very much new matter in them which you have not already examined.

VIII. IF the writer be remarkable for any *peculiar excellencies or defects in his style or manner of writing*, make just observations upon this also; and whatever ornaments you find there, or whatsoever blemishes occur in the language or manner of the writer, you may make just remarks upon them. And remember, that *one book read over in this manner, with all this laborious*

rious meditation, will tend more to enrich your understanding, than the skimming over the surface of twenty authors.

IX. By perusing books in the manner I have described, you will make all your reading subservient not only to the *enlargement of your treasures of knowledge*, but also to the *improvement of your reasoning powers*.

THERE are many who read with constancy and diligence, and yet make no advances in true knowledge by it. They are delighted with the notions which they read or hear, as they would be with stories that are told, but they do not weigh them in their minds as in a just balance, in order to determine their truth or falsehood; they make no observations upon them, or inferences from them. Perhaps their eye slides over the pages, or the words slide over their ears, and vanish like a *rhapsody* of evening tales, or the shadows of a cloud flying over a green field in a summer's day.

OR if they review them sufficiently to fix them in their remembrance, it is merely with a design to tell the tale over again, and shew what men of learning they are. Thus they dream out their days in a *course of reading* without real advantage. As a man may be eating all day, and for want of digestion is never nourished; so these *end-*

less readers may cram themselves in vain with intellectual food, and without real improvement of their minds, for want of digesting it by proper reflections.

X. BE diligent therefore in observing these directions. *Enter into the sense and argument* of the authors you read, examine all their proofs, and then judge of the truth or falshood of their opinions; and thereby you shall not only gain a rich increase of your understandings by those truths which the author teaches, when you see them well supported, but you shall acquire also by degrees an habit of judging justly, and of reasoning well, in imitation of the good writer whose works you peruse.

THIS is laborious indeed, and the mind is backward to undergo the fatigue of weighing every argument and tracing every thing to its original. It is much less labour to take all things upon trust; *believing is much easier than arguing*. But when *Studentio* had once persuaded his mind to tie itself down to this method which I have prescribed, he sensibly gained an admirable facility to read, and judge of what he read, by his daily practice of it, and the man made large advances in the pursuit of truth; while *Plumbinus* and *Plumeo* made less progress in knowledge, though they had read over more folios. *Plumeo*
skimmed

skimmed over the pages like a swallow over the flowery meads in *May*. *Plumbinus* read every line and syllable, but did not give himself the trouble of thinking and judging about them. They both could boast in company of their great reading, for they knew more titles and pages than *Studentio*, but were far less acquainted with science.

I CONFESS those whose reading is designed only to fit them for *much talk*, and *little knowledge*, may content themselves to run over their authors in such a sudden and trifling way; they may devour libraries in this manner, yet be poor reasoners at last, and have no solid wisdom or true learning. The traveller who walks on fair and softly in a course that points right, and examines every turning before he ventures upon it, will come sooner and safer to his journey's end, than he who runs through every lane he meets, though he gallop full speed all the day. The man of *much reading* and a *large retentive memory*, but without *meditation*, may become, in the sense of the world, a *knowing man*; and if he converses much with the ancients, he may attain the fame of *learning* too: but he spends his days afar off from wisdom and true judgment, and possesses very little of the substantial riches of the mind.

XI. NEVER apply yourselves to read any human author with a determination before-

hand either for or against him, or with a settled resolution to believe or disbelieve, to confirm or to oppose whatsoever he saith; but always read with design to lay your mind open to truth, and to embrace it where-soever you find it, as well as to reject every falshood, though it appear under ever so fair a disguise. How unhappy are those men who seldom take an author into their hands, but they have determined before they begin, whether they will like or dislike him! They have got some notion of his name, his character, his party, or his principles, by general conversation, or perhaps by some slight view of a few pages; and having all their own opinions adjusted beforehand, they read all that he writes with a prepossession either for or against him. Unhappy those who hunt and purvey for a party, and scrape together out of every author, all those things, and those only which favour their own tenets, while they despise and neglect all the rest!

XII. YET take this *caution*. I would not be understood here, as though I persuaded a person to live without any settled principles at all, by which to judge of men and books and things: or, that I would keep a man always doubting about his foundations. The chief things that I design in this advice, are these three.

I. THAT

1. THAT after our most necessary and important principles of science, prudence and religion, are settled upon good grounds, with regard to our present conduct and our future hopes, we should read with a just freedom of thought, all those books which treat of such subjects as may admit of doubt and reasonable dispute. Nor should any of our opinions be so resolved upon, especially in younger years, as never to hear or to bear an opposition to them.

2. WHEN we peruse those authors who defend our own settled sentiments, we should not take all their arguings for just and solid; but we should make a wise distinction betwixt the corn and the chaff, between solid reasoning and the mere superficial colours of it; nor should we readily swallow down all their lesser opinions because we agree with them in the greater.

3. THAT when we read those authors which oppose our most certain and established principles, we should be ready to receive any informations from them in other points, and not abandon at once every thing they say, though we are well fixed in opposition to their main point of arguing.

—— *Fas est, & ab hoste doceri.* VIRG.

*Seize upon truth where'er 'tis found,
Among your friends among your foes,
On Christian or on Heathen ground;
The flower's divine where'er it grows:
Neglect the prickles, and assume the rose.*

XIII. WHAT I have said hitherto on this subject, relating to *books* and *reading*, must be chiefly understood of that sort of books, and those hours of our reading and study, whereby we design to improve the intellectual powers of the mind with natural, moral, or divine knowledge. As for those treatises which are written to direct or to inforce and persuade our practice, there is one thing further necessary; and that is, that when our consciences are convinced that these rules of prudence or duty belong to us, and require our conformity to them, we should then call ourselves to account, and enquire seriously whether we have put them in practice or no; we should dwell upon the arguments, and impress the motives and methods of persuasion upon our own hearts, till we feel the force and power of them inclining us to the practice of the things which are there recommended.

IF folly or vice be represented in its open colours, or its secret disguises, let us search our hearts, and review our lives, and enquire how far we are criminal; nor
should

should we ever think we have done with the treatise till we feel ourselves in sorrow for our past misconduct, and aspiring after a victory over those vices, or till we find a cure of those follies begun to be wrought upon our souls.

IN all our studies and pursuits of knowledge, let us remember that virtue and vice, sin and holiness, and the conformation of our hearts and lives to the duties of true religion and morality, are things of far more consequence than all the furniture of our understandings, and the richest treasures of mere speculative knowledge; and that, because they have a more immediate and effectual influence upon our eternal felicity or eternal sorrow.

XIV. THERE is yet another sort of books, of which it is proper I should say something while I am treating on this subject; and these are *history, poesy, travels, books of diversion or amusement*; among which we may reckon also little common *pamphlets, news-papers*, or such like: for many of these, I confess once reading may be sufficient, where there is a tolerable good memory.

OR when several persons are in company, and one reads to the rest such sort of writings, once hearing may be sufficient; provided that every one be so attentive, and so free as to make their occasional remarks
on

on such lines or sentences, such periods or paragraphs as in their opinion deserve it. Now all those paragraphs or sentiments deserve a remark, which are new and uncommon, are noble and excellent for the matter of them, are strong and convincing for the argument contained in them, are beautiful and elegant for the language or the manner, or any way worthy of a second rehearsal; and at the request of any of the company let those paragraphs be read over again.

SUCH parts also of these writings as may happen to be remarkably stupid or silly, false or mistaken, should become subjects of an occasional criticism, made by some of the company; and this may give occasion to the repetition of them for confirmation of the censure, for amusement, or diversion.

STILL let it be remembered, that where the historical narration is of considerable moment, where the poesy, oratory, &c. shine with some degrees of perfection and glory, a single reading is neither sufficient to satisfy a mind that has a true taste of this sort of writings; nor can we make the fullest and best improvement of them without proper reviews, and that in our retirement as well as in company. Who is there that has any goût for polite writings that would be sufficiently satisfied with
hearing

hearing the beautiful pages of *Steele* or *Addison*, the admirable descriptions of *Virgil* or *Milton*, or some of the finest poems of *Pope*, *Young*, or *Dryden*, once read over to them, and then lay them by for ever?

XV. AMONG these writings of the latter kind, we may justly reckon short *miscellaneous essays* on all manner of subjects: such as the *Occasional Papers*, the *Tatlers*, the *Spectators*, and some other books that have been compiled out of the weekly or daily products of the press, wherein are contained a great number of bright thoughts, ingenious remarks, and admirable observations, which have had a considerable share in furnishing the present age with knowledge and politeness.

I wish every paper among these writings could have been recommended both as innocent and useful. I wish every unseemly idea and wanton expression had been banished from amongst them, and every trifling page had been excluded from the company of the rest when they had been bound up in volumes. But it is not to be expected, in so imperfect a state, that every page or piece of such mixed public papers should be entirely blameless and laudable. Yet in the main it must be confessed, there is so much virtue, prudence, ingenuity and goodness in them, especially in eight volumes of *Spectators*, there is such a reverence of

things sacred, so many valuable remarks for our conduct in life, that they are not improper to lie in parlours, or summer-houses, or places of usual residence, to entertain our thoughts in any moments of leisure, or vacant hours that occur. There is such a discovery of the follies, iniquities, and fashionable vices of mankind contained in them, that we may learn much of the humours and madneſſes of the age, and the public world, in our own solitary retirement, without the danger of frequenting vicious company, or receiving the mortal infection.

XVI. AMONG other books which are proper and requisite, in order to improve our knowledge in general, or our acquaintance with any particular science, it is necessary that we should be furnished with *Vocabularies* and *Dictionaries* of several sorts, viz. Of *common words, idioms and phrases*, in order to explain their *sense*: of *technical words* or the *terms of art*, to shew their use in arts and sciences; of *names of men, countries, towns, rivers, &c.* which are called *historical and geographical dictionaries, &c.* These are to be consulted and used upon every occasion; and never let an unknown word pass in your reading, without seeking for its sense and meaning in some of these writers.

IF such books are not at hand, you must supply the want of them, as well as you can, by consulting such as can inform you: and it is useful to note down the matters of doubt and enquiry in some pocket-book, and take the first opportunity to get them resolved either by persons or books when we meet with them.

XVII. BE not satisfied with a *mere knowledge of the best authors* that treat of any subject, instead of *acquainting yourselves thoroughly with the subject itself*. There is many a young student that is fond of enlarging his *knowledge of books*, and he contents himself with the notice he has of their *title-page*, which is the attainment of a *bookseller* rather than a *scholar*. Such persons are under a great temptation to practise these two follies. (1.) *To heap up a great number of books* at greater expence than most of them can bear, and to furnish their libraries infinitely better than their understandings. And (2.) when they have got such rich treasures of knowledge upon their shelves, they *imagine themselves men of learning*, and take a pride in talking of the names of famous authors, and the subjects of which they treat, without any real improvement of their own minds in true science or wisdom. At best, their learning reaches no farther than the *indexes* and *tables* of contents, while they know not how

to

to judge or reason concerning the matters contained in those authors.

AND indeed how many volumes of learning soever a man possesses, he is still deplorably poor in his understanding, till he has made these several parts of learning his own property, by reasoning, by judging for himself, and remembering what he has read.

C H A P. V.

JUDGMENT OF BOOKS.

I. **I**F we would *form a judgment of a book* which we have not seen before, the first thing that offers is the *title-page*, and we may sometimes guess a little at the import and design of a book thereby : though it must be confest, that titles are often deceitful, and promise more than the book performs. The *author's name*, if it be known in the world, may help us to conjecture at the performance a little more, and lead us to guess in what manner it is done. A perusal of the *preface or introduction* (which I before recommended) may further assist our judgment ; and if there be an *index of the contents*, it will give us still some advancing light.

IF

IF we have not leisure or inclination to read over the book itself regularly, then by the *titles of chapters*, we may be directed to peruse several particular chapters or sections, and observe whether there be any thing valuable or important in them. We shall find hereby whether the author explains his ideas clearly, whether he reasons strongly, whether he methodizes well, whether his thoughts and sense be manly and his manner polite; or, on the other hand, whether he be obscure, weak, trifling and confused: or, finally, whether the matter may not be solid and substantial, though the manner or style be rude and disagreeable.

II. BY having run through several chapters and sections in this manner, we may generally judge whether the treatise be worth a compleat perusal or no. But if by such an occasional survey of some chapters, our expectation be utterly discouraged, we may well lay aside that book; for there is great probability he can be but an indifferent writer on that subject, if he affords but one *prize* to divers *blanks*, and it may be some downright *blots* too. The piece can hardly be valuable if in seven or eight chapters which we peruse, there be but little truth, evidence, force of reasoning, beauty, and ingenuity, thought, &c. mingled with much error, ignorance, impertinence, dullness, mean and common thoughts, inaccuracy,

curacy, sophistry, railing, &c. Life is too short, and time is too precious, to read every new book quite over, in order to find that it is not worth the reading.

III. THERE are *some general mistakes* which persons are frequently guilty of in passing a judgment on the books which they read.

ONE is this; when a treatise is written but tolerably well, we are ready to pass a favourable judgment of it, and sometimes to exalt its character far beyond its merit, if it *agree with our own principles, and support the opinions of our party*. On the other hand, if the author be of *different sentiments*, and *espouse contrary principles*, we can find neither wit nor reason, good sense nor good language in it. Whereas, alas, if our opinions of things were certain and infallible truth, yet a silly author may draw his pen in the defence of them, and he may attack even gross errors with feeble and ridiculous arguments. *Truth* in this world is not always attended and supported by the wisest and safest methods; and *error*, though it can never be maintained by just reasoning, yet may be artfully covered and defended: an ingenious writer may put excellent colours upon his own mistakes. Some *Socinians*, who deny the atonement of *Christ*, have written well, and with much appearance of argument for their own unscriptural

tural sentiments, and some writers for the *trinity* and *satisfaction* of *Christ* have exposed themselves and the sacred doctrine, by their feeble and foolish manner of handling it. Books are never to be judged of merely by their subject, or the opinion they represent, but by the justness of their sentiments, the beauty of their manner, the force of their expression, or the strength of reason, and the weight of just and proper argument which appears in them.

BUT this folly and weakness of trifling instead of arguing, does not happen to fall only to the share of *Christian* writers: there are some who have taken the pen in hand to support the *deistical* or *antichristian* scheme of our days, who make big pretences to reason upon all occasions, but seem to have left it quite behind them when they are jesting with the bible, and grinning at the books which we call sacred. Some of these performances would scarcely have been thought tolerable, if they had not assaulted the *Christian* faith, though they are now grown up to a place among the admired pens. I much question whether several of the *rhapsodies* called the *Characteristics*, would ever have survived the first edition, if they had not discovered so strong a tincture of *infidelity*, and now and then cast out a profane sneer at *our holy religion*. I have sometimes indeed been

ready to wonder, how a book in the main so loosely written, should ever obtain so many readers amongst men of sense. Surely they must be conscious in the perusal, that sometimes a *patrician* may write as idly as a man of *plebeian* rank, and trifle as much as an old school-man, though it is in another form. I am forced to say, there are few books that ever I read, which made any pretence to a great genius, from which I derived so little valuable knowledge as from these treatises. There is indeed amongst them a lively pertness, a parade of literature, and much of what some folks now a days call *politeness*; but it is hard that we should be bound to admire all the reveries of this author, under the penalty of being unfashionable.

IV. *ANOTHER* mistake which some persons fall into is this. When they read a treatise on a subject with which they *have but little acquaintance*, they find almost every thing new and strange to them, their understandings are greatly entertained and improved by the occurrence of many things which were unknown to them before, they admire the treatise, and commend the author at once; whereas if they had but attained *a good degree of skill in that science*, perhaps they would find that the author had written very poorly, that neither his sense nor his method was just
3 and

and proper, and that he had nothing in him but what was very common or trivial in his discourses on that subject.

HENCE it comes to pass, that *Cario* and *Faber* who were both bred up to labour and unacquainted with the *sciences*, shall admire one of the *weekly papers*, or a *little pamphlet* that talks pertly on some critical or learned theme, because the matter is all strange and new to them, and they join to extol the writer to the skies; and for the same reason a *young academic* shall dwell upon a *Journal* or an *Observator* that treats of *trade* and *politics* in a dictatorial style, and shall be lavish in praise of the author. While at the same time, persons well skilled in those different subjects, hear the impertinent tattle with a just contempt; for they know how weak and awkward many of those little diminutive discourses are; and that those very papers of *science*, *politics* or *trade*, which were so much admired by the ignorant, are perhaps, but very mean performances; though it must be also confessed, there are some excellent essays in those papers, and that upon science as well as trade.

V. BUT there is a danger of mistake in our *judgment of books* on the other hand also: for when we have made ourselves *masters of any particular theme of knowledge*, and surveyed it long on all sides, there

is perhaps scarcely any writer on that subject who much entertains and pleases us afterwards, because we find little or nothing new in him; and yet in a true judgment perhaps, his sentiments are most proper and just, his explications clear, and his reasonings strong, and all the parts of the discourse are well connected and set in a happy light; but we knew most of those things before, and therefore they strike us not, and we are in danger of discommending them.

THUS the *learned* and the *unlearned*, have their several distinct dangers and prejudices ready to attend them in their judgment of the writings of men. These which I have mentioned are a *specimen* of them, and indeed but a *mere specimen*; for the prejudices that warp our judgment aside from truth, are almost infinite and endless.

VI. YET I cannot forbear to point out two or three more of these follies, that I may attempt something toward the correction of them, or at least to guard others against them.

THERE are some persons of a forward and lively temper, who are fond to intermeddle with all appearances of knowledge, and will give their judgment on a book as soon as the title of it is mentioned, for they would not willingly seem ignorant of any thing that others know. And especially if they happen to have any superior character

character or passions of this world, they fancy they have a right to talk freely upon every thing that stirs or appears, though they have no other pretence to this freedom.

Divito is worth forty thousand pounds;

Politulus is a fine young gentleman, who sparkles in all the shining things of dress and equipage;

Aulinus is a small attendant on a minister of state, and is at court almost every day.

These three happened to meet in a visit, where an excellent book of warm and refined devotions lay in the window.

What dull stuff is here? said *Divito*, *I never read so much nonsense in one page in my life, nor would I give a shilling for a thousand such treatises.*

Aulinus, though a courtier, and not used to speak roughly, yet would not allow there was a line of good sense in the book, and pronounced him a madman that wrote it in his secret retirement, and declared him a fool that published it after his death.

Politulus had more manners than to differ from men of such a rank and character, and therefore he sneered at the devout expressions as he heard them read, and made the divine treatise a matter of scorn and ridicule; and yet it was well known, that neither this fine gentleman, nor the courtier, nor the man of wealth, had a grain of devotion in them beyond their horses that waited at the door with their gilded chariots. But this is the way of the

world: blind men will talk of the beauty of colours, and of the harmony or disproportion of figures in painting; the deaf will prate of discords in music; and those who have nothing to do with religion, will arraign the best treatise on divine subjects, though they do not understand the very language of the scripture, nor the common terms or phrases used in *Christianity*.

VII. I might here name another sort of judges, who will set themselves up to decide in favour of an author, or will pronounce him a mere blunderer, according to the company they have kept, and the judgment they have heard past upon a book by others of their own stamp or size, though they have no knowledge or taste of the subject themselves. These with a fluent and voluble tongue become mere ecchos of the praises or censures of other men. *Sonillus* happened to be in the room where the three gentlemen just mentioned gave out their thoughts so freely upon an admirable book of devotion; and two days afterwards he met with some friends of his where this book was the subject of conversation and praise. *Sonillus* wondered at their dulness, and repeated the jests which he had heard cast upon the weakness of the author. His knowledge of the book and his decision upon it was all from *bearsay*, for he had never seen it: and if he had read
it

it through, he had no manner of right to judge about the things of religion, having no more knowledge, nor taste of any thing of inward piety, than a hedgehog or a bear has of politeness.

WHEN I had written these remarks, *Probus*, who knew all these four gentlemen, wished they might have opportunity to read their own character as it is represented here. Alas! *Probus*, I fear it would do them very little good, though it may guard others against their folly: for there is never a one of them would find their own name in these characters if they read them, though all their acquaintance would acknowledge the features immediately, and see the persons almost alive in the picture.

VIII. THERE is yet another mischievous principle which prevails among some persons in passing a judgment on the writings of others, and that is, when from the secret stimulation of *vanity*, *pride* or *envy*, they despise a valuable book, and throw contempt upon it by wholesale: and if you ask them the reason of their severe censure, they will tell you perhaps, they have found a mistake or two in it, or there are a few sentiments or expressions not suited to their tooth and humour. *Bavius* cries down an admirable treatise of philosophy, and says there is *atheism* in it, because there

are a few sentences that seem to suppose *brutes to be mere machines*. Under the same influence, *Momus* will not allow *Paradise Lost* to be a good poem, because he had read some flat and heavy lines in it, and he thought *Milton* had too much honour done him. It is a paultry humour that inclines a man to rail at any human performance because it is not absolutely perfect. *Horace* would give us a better example.

*Sunt delicta quibus nos ignovisse velimus,
 Nam neque chorda sonum reddit quam vult
 manus & mens,
 Nec semper feriet quodcunque minabitur arcus:
 Atque ubi plura nitent in carmine, non ego
 paucis
 Offendor maculis, quas aut incuria fudit,
 Aut humana parum cavit natura.*

Hor. de Art. Poet.

Thus Englished.

*Be not too rigidly censorious:
 A string may jar in the best master's hand,
 And the most skilful archer miss his aim:
 So in a poem elegantly writ
 I will not quarrel with a small mistake,
 Such as our nature's frailty may excuse.*

Roscommon.

THIS noble translator of *Horace*, whom I here cite, has a very honourable opinion
 of

of *Homer* in the main, yet he allows him to be justly censured for some grosser spots and blemishes in him.

*For who without aversion ever look'd
On holy garbage, tho' by Homer cook'd,
Whose railing heroes, and whose wounded
gods,
Make some suspect he snores as well as nods.*

SUCH wise and just distinctions ought to be made when we pass a judgment on mortal things, but *envy* condemns by wholesale. *Envy* is a cursed plant; some fibres of it are rooted almost in every man's nature, and it works in a sly and imperceptible manner, and that even in some persons who in the main are men of wisdom and piety. They know not how to bear the praises that are given to an ingenious author, especially if he be *living* and of their *profession*, and therefore they will, if possible, find some blemish in his writings, that they may nibble and bark at it. They will endeavour to diminish the honour of the best treatise that has been written on any subject, and to render it useless by their censures, rather than suffer their envy to lie asleep, and the little mistakes of that author to pass unexposed. Perhaps they will commend the work in general with a pretended air of candour, but pass
so

so many sly and invidious remarks upon it afterward, as shall effectually destroy all their cold and formal praises *.

IX. WHEN a person feels any thing of this *invidious humour* working in him, he may by the following considerations attempt the correction of it. Let him think with himself how many are the *beauties* of such an author whom he censures, in comparison of his *blemishes*, and remember that it is a much more honourable and good-natured thing to find out peculiar beauties than faults: true and *undisguised candour* is a much more amiable and divine talent than *accusation*. Let him reflect again, what an easy matter it is to *find a mistake* in all *human* authors, who are necessarily fallible and imperfect.

I CONFESS where an author sets up himself to ridicule *divine* writers and things sacred, and yet assumes an air of sovereignty and dictatorship, to exalt and almost deify all the *Pagan* ancients, and cast his scorn upon all the moderns, especially if they do but favour of miracles and the gospel,
it

* I grant when wisdom itself censures a weak and foolish performance, it will pass its severe sentence, and yet with an air of candour, if the author has any thing valuable in him: but *envy* will oftentimes imitate the same favourable airs, in order to make its false cavils appear more just and credible, when it has a mind to snarl at some of the brightest performances of a human writer.

it is fit the admirers of this author should know that *nature and these ancients* are not the same, though some writers always unite them. Reason and nature never made these ancient *heathens* their standard, either of art or genius, of writing or heroism. Sir *Richard Steele* in his little essay, called *The Christian Hero*, has shewn our *Saviour* and *St. Paul* in a more glorious and transcendent light, than a *Virgil* or a *Homer* could do for their *Achilles*, *Ulysses*, or *Æneas*; and I am persuaded if *Moses* and *David* had not been inspired writers, these very men would have ranked them at least with an *Herodotus* and *Horace*, if not given them the superior place.

BUT where an author has many beauties consistent with virtue, piety, and truth, let not little critics exalt themselves, and shower down their ill-nature upon him, without bounds or measure; but rather stretch their own powers of soul till they write a treatise superior to that which they condemn. This is the noblest and surest manner of suppressing what they censure.

A LITTLE wit, or a little learning, with a good degree of vanity and ill-nature, will teach a man to pour out whole pages of remark and reproach upon one real or fancied mistake of a great and good author: and this may be dressed up by the same talents, and made entertaining enough to the world,

world, who loves reproach and scandal: but if the remarker would but once make this attempt, and try to *outshine the author by writing a better book on the same subject*, he would soon be convinced of his own insufficiency, and perhaps might learn to judge more justly and favourably of the performance of other men. A *cobler*, or a *shoemaker* may find some little fault with the latchet of a shoe that an *Apelles* had painted, and perhaps with justice too; when the whole figure and portraiture is such as none but an *Apelles* could paint. Every poor low genius may cavil at what the richest and the noblest hath performed; but it is a sign of *envy* and *malice*, added to the *littleness* and *poverty of genius*, when such a cavil becomes a sufficient reason to pronounce at once against a bright author and a whole valuable treatise.

X. ANOTHER, and that a very frequent fault in passing a judgment upon books, is this, that persons spread the same praises or the same reproaches over a whole treatise, and all the chapters in it, which are due only to some of them. They judge as it were by wholesale, without making a due distinction between the several parts or sections of the performance; and this is ready to lead those who hear them talk, into a dangerous mistake. *Florus* is a great and just admirer of the late archbishop of
Cambray,

Cambray, and mightily commends every thing he has written, and will allow no blemish in him : whereas the writings of that excellent man are not all of a piece, nor are those very books of his, which have a good number of beautiful and valuable sentiments in them, to be recommended throughout, or all at once without distinction. There is his *Demonstration of the Existence and Attributes of God*, which has justly gained an universal esteem, for bringing down some new and noble thoughts of the wisdom of the creation to the understanding of the unlearned, and they are such as well deserve the perusal of the men of science, perhaps as far as the 50th section ; but there are many of the following sections which are very weakly written, and some of them built upon an enthusiastical and mistaken scheme, akin to the peculiar opinions of father *Malebranche* ; such as sect. 51, 53. *That we know the finite only by the ideas of the infinite.* Sect. 55, 60. *That the superior reason in man, is God himself acting in him.* Sect. 61, 62. *That the idea of unity cannot be taken from creatures but from God only :* and several of his sections, from 65 to 68, upon the doctrine of *liberty*, seem to be inconsistent. Again, toward the end of his book he spends more time and pains than are needful in refuting the *Epicurean* fancy of atoms moving eternally through

through infinite changes, which might be done effectually in a much shorter and better way.

So in his *Posthumous* Essays, and his *Letters*, there are many admirable thoughts in practical and experimental religion, and very beautiful and divine sentiments in devotion; but sometimes in large paragraphs, or in whole chapters together, you find him in the clouds of *mystic* divinity, and he never descends within the reach of common ideas or common sense.

BUT remember this also, that there are but few such authors as this great man, who talks so very weakly sometimes, and yet in other places is so much superior to the greatest part of writers.

THERE are other instances of this kind where men of good sense in the main set up for judges, but they carry too many of their passions about them, and then like lovers, they are in rapture at the name of their fair idol; they lavish out all their incense upon that shrine, and cannot bear the thought of admitting a blemish in them.

You shall hear *Altinofso* not only admire *Casimire* of *Poland* in his lyrics, as the utmost purity and perfection of *Latin* poesy, but he will allow nothing in him to be extravagant or faulty, and will vindicate every line: nor can I much wonder at it,
when

when I have heard him pronounce *Lucan* the best of the ancient *Latins*, and idolize his very weakneses and mistakes. I will readily acknowledge the odes of *Casimire* to have more spirit and force, more magnificence and fire in them, and in twenty places arise to more dignity and beauty than I could ever meet with in any of our modern poets: yet I am afraid to say, that *Palla subtilis è luce* has dignity enough in it for a robe made for the Almighty, lib. 4. od. 7. l. 37. or that the man of virtue in od. 3. l. 44. under the ruins of heaven and earth, will bear up the fragments of the falling world with a comely wound on his shoulders.

————— *late ruenti*
Subjiciens sua colla cælo
Mundum decoro vulnere fulciet;
Interque cæli fragmina——

YET I must needs confess also, that it is hardly possible a man should rise to so exalted and sublime a vein of poesy as *Casimire*, who is not in danger now and then of such extravagancies: but still they should not be admired or defended, if we pretend to pass a just judgment on the writings of the greatest men.

MILTON is a noble genius, and the world agrees to confess it; his poem of *Paradise Lost* is a glorious performance, and
 rivals

rivals the most famous pieces of antiquity; but that reader must be deeply prejudiced in favour of the poet, who can imagine him equal to himself through all that work. Neither the sublime sentiments, nor dignity of numbers, nor force or beauty of expression are equally maintained, even in all those parts which require grandeur or beauty, force or harmony. I cannot but consent to Mr. *Dryden's* opinion, though I will not use his words, that for some scores of lines together, there is a coldness and flatness, and almost a perfect absence of that spirit of poesy which breathes, and lives, and flames in other pages.

XI. WHEN you hear any person pretending to give his judgment of a book, consider with yourself whether he be a *capable* judge, or whether he may not lie under some unhappy bias or *prejudice*, for or against it, or whether he has made a sufficient enquiry to form his justest sentiments upon it.

THOUGH he be a man of good sense, yet he is incapable of passing a true judgment of a particular book, if he be not well acquainted with the subject of which it treats, *and the manner* in which it is written, be it verse or prose; or if he hath not had opportunity or leisure to look sufficiently into the writing itself.

AGAIN,

AGAIN, though he never be so capable of judging on all other accounts, by the knowledge of the subject, and of the book itself, yet you are to consider also, whether there be any thing in the author, in his manner, in his language, in his opinions, and his particular party, which may warp the sentiments of him that judgeth, to think well or ill of the treatise, and to pass too favourable or too severe a sentence concerning it.

IF you find that he is either an unfit judge because of his ignorance, or because of his prejudices, his judgment of that book should go for nothing. *Philographo* is a good divine, an useful preacher, and an approved expositor of scripture, but he never had a taste for any of the polite learning of the age: he was fond of every thing that appeared in a devout dress, but all verse was alike to him: he told me last week there was a very fine book of poems published on the three christian graces, *Faith, Hope, and Charity*; and a most elegant piece of oratory on the four last things, *Death, Judgment, Heaven, and Hell*. Do you think I shall buy either of those books merely on *Philographo's* recommendation?

C H A P. VI.

Of living Instructions and Lectures, of Teachers and Learners.

I. **T**HERE are few persons of so penetrating a genius, and so just a judgment, as to be capable of learning the arts and sciences without the assistance of *Teachers*. There is scarcely any science so safely and so speedily learned, even by the noblest genius and the best books, without a tutor. His assistance is absolutely necessary for most persons, and it is very useful for all beginners. *Books* are a sort of *dumb teachers*, they point out the way to learning; but if we labour under any doubt or mistake, they cannot answer sudden questions, or explain present doubts and difficulties: this is properly the work of a *living instructor*.

II. THERE are very few tutors who are sufficiently furnished with such *universal learning*, as to sustain all the parts and provinces of instruction. The sciences are numerous, and many of them lie far wide of each other; and it is best to enjoy the instruction of two or three tutors at least, in order to run through the whole *Encyclopedia* or *Circle of Sciences*, where it may be obtained;

obtained; then we may expect that each will teach the few parts of learning which are committed to his care in greater perfection. But where this advantage cannot be had with convenience, one great man must supply the place of two or three common instructors.

III. IT is not sufficient that instructors be competently skilled in those *sciences* which they profess and teach; but they should have skill also in the *art or method of teaching*, and patience in the *practice* of it.

IT is a great unhappiness indeed, when persons by a spirit of party, or faction, or interest, or by purchase, are set up for tutors, who have neither due knowledge of science, nor skill in the way of communication. And alas, there are others, who with all their ignorance and insufficiency, have self-admiration and effrontery enough to set up themselves: and the poor pupils fare accordingly, and grow lean in their understandings.

AND let it be observed also, there are some very learned men who know much themselves, but have not the talent of communicating their own knowledge; or else they are lazy, and will take no pains at it. Either they have an obscure and perplexed way of talking, or they shew their learning uselessly, and make a long periphrasis on every word of the book they explain, or

they cannot condescend to young beginners, or they run presently into the elevated parts of the science, because it gives themselves greater pleasure, or they are soon angry and impatient, and cannot bear with a few impertinent questions of a young, inquisitive, and sprightly genius; or else they skim over a science in a very slight and superficial survey, and never lead their disciples into the depths of it.

IV. A GOOD tutor should have *characters and qualifications very different from all these*. He is such a one as both can and will apply himself with diligence and concern, and indefatigable patience to effect what he undertakes; to teach his disciples, and see that they learn, to adapt his way and method as near as may be to the various dispositions, as well as to the capacities of those whom he instructs, and to enquire often into their progress and improvement.

AND he should take particular care of his own temper and conduct, that there be nothing in him or about him which may be of ill example; nothing that may favour of a haughty temper, a mean and sordid spirit; nothing that may expose him to the aversion or to the contempt of his scholars, or create a prejudice in their minds against him and his instructions: but, if possible, he should have so much of a natural candour and sweetness mixt with all the improve-
ments

ments of learning, as might convey knowledge into the minds of his disciples with a sort of gentle insinuation and sovereign delight, and may tempt them into the highest improvements of their reason by a resistless and insensible force. But I shall have occasion to say more on this subject, when I come to speak more directly of the *methods of the communication of knowledge*.

V. THE *learner* should attend with constancy and care on all the instructions of his *tutor*; and if he happens to be at any time unavoidably hindered, he must endeavour to retrieve the loss by double industry for time to come. He should always recollect and review his lectures, read over some other author or authors upon the same subject, confer upon it with his instructor or with his associates, and write down the clearest result of his present thoughts, reasonings, and enquiries, which he may have recourse to hereafter, either to re-examine them, and to apply them to proper use, or to improve them further to his own advantage.

VI. A *student* should never satisfy himself with bare attendance on the lectures of his *tutor*, unless he clearly takes up his sense and meaning, and understands the things which he teaches. A *young disciple* should behave himself so well as to gain the affection and the ear of his *instructor*, that

upon every occasion he may with the utmost freedom ask questions, and talk over his own sentiments, his doubts and difficulties with him, and in an humble and modest manner desire the solution of them.

VII. LET the *learner* endeavour to maintain an honourable opinion of his *instructor*, and heedfully listen to his *instructions*, as one willing to be led by a more experienced guide: and though he is not bound to fall in with every sentiment of his tutor, yet he should so far comply with him, as to resolve upon a just consideration of the matter, and try and examine it thoroughly with an honest heart, before he presume to determine against him. And then it should be done with great modesty, with an humble jealousy of himself, and apparent unwillingness to differ from his tutor, if the force of argument and truth did not constrain him.

VIII. IT is a frequent and growing folly in our age, *that pert young disciples soon fancy themselves wiser than those who teach them*: at the first view, or upon a very little thought, they can discern the insignificance, weakness and mistake of what their teacher asserts. The youth of our day, by an early petulancy, and pretended liberty of thinking for themselves, dare reject at once, and that with a sort of scorn, all those sentiments and doctrines which their teachers

teachers have determined, perhaps after long and repeated consideration, after years of mature study, careful observation, and much prudent experience.

IX. IT is true, teachers and masters are not infallible, nor are they always in the right; and it must be acknowledged, it is a matter of some difficulty for younger minds to maintain a just and solemn veneration for the *authority and advice of their parents, and the instructions of their tutors*, and yet at the same time to secure to themselves a *just freedom in their own thoughts*. We are sometimes too ready to imbibe all their sentiments without examination, if we reverence and love them; or, on the other hand, if we take all freedom to contest their opinions, we are sometimes tempted to cast off that love and reverence to their persons which God and nature dictate. Youth is ever in danger of these two extremes.

X. BUT I think I may safely conclude thus: though the authority of a teacher must not absolutely determine the judgment of his pupil, yet young and raw and unexperienced learners should pay all proper deference that can be, to the instructions of their parents and teachers, short of absolute submission to their dictates. Yet still we must maintain this, that they should never receive any opinion into their assent,

whether it be conformable or contrary to the tutor's mind, without sufficient evidence of it first given to their own reasoning powers.

C H A P. VII.

Of learning a LANGUAGE.

THE first thing required in *reading an author*, or in *hearing lectures of a tutor*, is, that you well understand the *language* in which they write or speak. *Living languages*, or such as are the native tongue of any nation in the present age, are more easily learnt and taught by a few rules, and much familiar converse, joined to the reading some proper authors. The *dead languages* are such as cease to be spoken in any nation; and even these are more easy to be taught (as far as may be) in that method wherein *living languages* are best learnt, *i. e.* partly by rule, and partly by rote or custom. And it may not be improper in this place to mention a very few *directions for that purpose*.

I. *BEGIN with the most necessary and most general observations and rules which belong*

belong to that language, compiled in the form of a grammar; and these are but few in most languages. The regular declensions and variations of nouns and verbs, should be early and thoroughly learnt by heart, together with twenty or thirty of the plainest and most necessary rules of syntax.

BUT let it be observed, that in almost all languages, some of the very commonest *nouns* and *verbs* have many irregularities in them: such are the common *auxiliary* verbs *to be* and *to have*, *to do* and *to be done*, &c. The *comparatives* and *superlatives* of the words *good*, *bad*, *great*, *much*, *small*, *little*, &c. and these should be learnt among the first rules and variations, because they continually occur.

BUT as to other words which are less frequent, let but few of the *anomalies* or irregularities of the tongue be taught among the *general rules* to young beginners. These will better come in afterwards to be learnt by advanced scholars in a way of notes on the rules, as in the *Latin* grammar called the *Oxford Grammar*, or in *Rudiman's* notes on his *Rudiments*, &c. Or they may be learnt by examples alone, when they do occur; or by a larger and more complete system of grammar, which descends to the more particular forms of speech: so the *beteroclite* nouns of the *Latin* tongue, which are taught in the school-

school-book called *Quæ genus*, should not be touched in the first learning of the rudiments of the tongue.

II. As the *grammar* by which we learn any tongue should be very short at first, so it must be written in a tongue with which you are well acquainted, and which is very familiar to you. Therefore I much prefer even the common *English accidence* (as it is called) to any *grammar* whatsoever written in *Latin* for this end. The *English accidence* has doubtless many faults: but those editions of it which were printed since the year 1728, under the correction of a learned professor, are the best; or the *English Rudiments* of the *Latin* tongue, by that learned *North Briton* Mr. *Ruddiman*, which are perhaps the most useful books of this kind which I am acquainted with; especially because I would not depart too far from the ancient and common forms of teaching, which several good grammarians have done, to the great detriment of such lads as have been removed to other schools.

THE tiresome and unreasonable method of learning the *Latin* tongue by a *grammar* with *Latin* rules, would appear even to those masters who so teach it, in its proper colours of absurdity and ridicule, if those very masters would attempt to learn the *Chinese* or *Arabic* tongue, by a *grammar* written in the *Arabic* or the *Chinese* language.

language. Mr. *Clarke* of *Hull* has said enough in a few pages of the preface to his new grammar 1723, to make that practice appear very irrational and improper; though he has said it in so warm and angry a manner that it has kindled Mr. *Ruddiman* to write against him, and to say what can be said to vindicate a practice, which, I think, is utterly indefensible.

III. *At the same time when you begin the rules begin also the practice.* As for instance, when you decline *musa*, *musæ*, read and construe the same day some easy *Latin* author by the help of a tutor, or with some *English* translation: chuse such a book whose style is simple, and the subject of discourse is very plain, obvious, and not hard to be understood; many little books have been composed with this view, as *Corderius's Colloquies*, some of *Erasmus's* little writings, the sayings of the wise men of *Greece*, *Cato's* moral distichs, and the rest which are collected at the end of Mr. *Ruddiman's English* grammar, or the *Latin Testament* of *Castellio's* translation, which is accounted the purest *Latin*, &c. These are very proper upon this occasion, together with *Æsop's* and *Phædrus's Fables*, and little stories, and the common and daily affairs of domestic life written in the *Latin* tongue. But let the higher poets, and orators and historians, and other writers whose language
is

is more laboured, and whose sense is more remote from common life, be rather kept out of sight till there be some proficiency made in the language.

It is strange, that masters should teach children so early *Tully's Epistles* or *Orationes*, or the *poems* of *Ovid* or *Virgil*, whose sense is oftentimes difficult to find, because of the great transposition of the words; and when they have found the grammatical sense, they have very little use of it, because they have scarcely any notion of the ideas and design of the writer, it being so remote from the knowledge of a child: whereas little common stories and colloquies, and the rules of a child's behaviour, and such obvious subjects, will much better assist the memory of their words by their acquaintance with the things.

IV. HERE it may be useful also, to appoint the learner *to get by heart the more common and useful words, both nouns and adjectives, pronouns and verbs*, out of some well formed and judicious *vocabulary*. This will furnish him with names for the most familiar ideas.

V. As soon as ever the learner is capable, *let the tutor converse with him in the tongue* which is to be learned, if it be a living language, or if it be *Latin*, which is the living language of the learned world: thus he will acquaint himself a little with it by *rote*

as

as well as by *rule*, and by living practice as well as by reading the writings of the dead. For if a child of two years old by this method learns to speak his mother-tongue, I am sure the same method will greatly assist and facilitate the learning of any other language to those who are older.

VI. LET *the chief lessons and the chief exercise of schools, v. c.* where *Latin* is learnt, (at least for the first year or more) be the nouns, verbs and general rules of *syntax*, together with a mere translation out of some *Latin* author into *English*; and let scholars be employed and examined by their teacher, daily, in reducing the words to their original or theme, to the first case of nouns or first tense of verbs, and giving an account of their formations and changes, their *syntax* and dependencies, which is called *parfing*. This is a most useful exercise to lead boys into a complete and thorough knowledge of what they are doing.

THE *English* translations, which the learner has made, should be well corrected by the master, and then they should be translated back again for the next day's exercise by the child into *Latin*, while the *Latin* author is withheld from him: but he should have the *Latin* words given him in their first case and tense; and should never be left to seek them himself from a dictionary:

dictionary: and the nearer he translates it to the words of the author whence he derives his *English*, the more should the child be commended. Thus will he gain skill in two languages at once. I think Mr. *Clarke* has done good service to the public by his translations of *Latin* books for this end.

BUT let the foolish custom of employing every silly boy to make *themes* or *declamations*, and *verses* upon moral subjects in a strange tongue, before he understands common sense even in his own language, be abandoned and cashiered for ever.

VII. As the learner improves, let him *acquaint himself with the anomalous words*, the *irregular declension of nouns and verbs*, the more *uncommon connections of words in syntax*, and the *exceptions of the general rules of grammar*; but let them all be reduced, as far as possible, to those several original and general rules which he has learned, as the proper rank and place to which they belong.

VIII. WHILE he is doing this, it may be *proper for him to converse with authors which are a little more difficult*, with *historians, orators and poets, &c.* but let his tutor inform him of the *Roman* or *Greek* customs which occur therein. Let the lad then translate some parts of them into his mother tongue, or into some other well-known

known language, and thence back again into the original language of the author. But let the *verse* be translated into *prose*, for *poesy* does not belong to *grammar*.

IX. By this time he will be able to *acquaint himself with some of the special emphasis of speech*, and the *peculiar idioms of the tongue*. He should be taught also the special *beauties* and *ornaments* of the language: and this may be done partly by the help of authors who have collected such *idioms*, and cast them into an easy method, and partly by the judicious remarks which his instructor may make upon the authors which he reads, wheresoever such peculiarities of speech or special elegancies occur.

X. THOUGH the labour of learning all the *lessons by heart*, that are borrowed from *poetical authors* which they construe, is an unjust and unnecessary imposition upon the learner, yet he must take the pains to *commit to memory the most necessary, if not all the common rules of grammar*, with an example or two under each of them: and some of the select and most useful periods or sentences in the *Latin* or *Greek* author which he reads, may be learnt by heart, together with some of the choicer lessons out of their poets; and sometimes whole episodes out of *heroic* poems, &c. as well as whole odes among the *lyrics* may deserve this honour.

XI. LET this be always carefully observed, that *the learners perfectly understand the sense as well as the language of all those rules, lessons or paragraphs which they attempt to commit to memory.* Let the teacher possess them of their true meaning, and then the labour will become easy and pleasant: whereas to impose on a child to get by heart a *long scroll of unknown phrases or words, without any ideas under them,* is a piece of useless tyranny, a cruel imposition, and a practice fitter for a jack-daw or a parrot, than for any thing that wears the shape of man.

XII. AND here, I think, I have a fair occasion given me to consider that *question* which has been often debated in conversation, *viz. Whether the teaching a school full of boys to learn Latin by the Heathen poets, as Ovid in his Epistles, and the silly fables of his Metamorphosis; Horace, Juvenal, and Martial in their impure odes, satires and epigrams, &c. is so proper and agreeable a practice in a Christian country?*

XIII. (I.) I GRANT the *language and style of those men who wrote in their own native tongue, must be more pure and perfect* in some nice elegancies and peculiarities, than modern writers of other nations who have imitated them; and it is owned also, that the beauties of their poesy may much excel: but in either of these things, boys
cannot

cannot be supposed to be much improved or injured by one or the other,

XII. (2.) It shall be confessed too, that *modern poets in every living language, have brought into their works so many words, epithets, phrases, and metaphors, from the heathen fables and stories of their gods and heroes, that in order to understand these modern writers, it is necessary to know a little of those ancient follies: but it may be answered, that a good dictionary, or such a book as the *Pantheon*, or history of those *Gentile deities*, &c. may give sufficient information of those stories, so far as they are necessary and useful to school-boys.*

XV. (3.) I WILL grant yet further, that *lads who are designed to make great scholars or divines, may by reading these *Heathen* poets, be taught better to understand the writings of the ancient fathers against the *Heathen religion*; and they learn here what ridiculous fooleries the *Gentile nations* believed as the articles of their faith, what wretched and foul idolatries they indulged and practised as duties of religion, for want of the light of divine revelation. But this perhaps may be learnt as well either by the *Pantheon*, or some other collection, at school; or after they have left the school, they may read what their own inclinations lead them to, and whatsoever of this kind may be really useful for them.*

XVI. BUT the great question is, *Whether all these advantages which have been mentioned, will compensate for the long months and years that are wasted among their incredible and trifling romances, their false and shameful stories of the gods and goddesses and their amours, and the lewd heroes and vicious poets of the Heathen world? Can these idle and ridiculous tales be of any real and solid advantage in human life? Do they not too often defile the mind with vain, mischievous and impure ideas? Do they not stick long upon the fancy, and leave an unhappy influence upon youth? Do they not tincture the imagination with folly and vice very early, and prevent it from all that is good and holy?*

XVII. UPON the whole survey of things it is my opinion, that for almost all boys who learn this tongue, it would be much safer to be taught *Latin poesy* (as soon and as far as they can need it) from those excellent translations of *David's psalms*, which are given us by *Buchanan* in the various measures of *Horace*; and the lower classes had better read Dr. *Johnston's* translation of these psalms, another elegant writer of the *Scots* nation, instead of *Ovid's Epistles*; for he has turned the same psalms perhaps with greater elegancy into *elegiac verse*, whereof the learned *W. Benson, Esq;* has lately published a noble edition, and I

hear that these Psalms are honoured with an increasing use in the schools of *Holland* and *Scotland*. A stanza, or a couplet of these writers would now and then stick upon the minds of youth, and would furnish them infinitely better with pious and moral thoughts, and do something towards making them good men and Christians.

XVIII. A LITTLE book collected from the *Psalms* of both these translators, *Buchanan* and *Johnston*, and a few other *Christian* poets, would be of excellent use for schools to begin their instructions in *Latin poesy*; and I am well assured this would be richly sufficient for all those in lower rank, who never design a learned profession, and yet custom has foolishly bound them to learn that language.

BUT lest it should be thought hard to cast *Horace* and *Virgil*, *Ovid* and *Juvenal* entirely out of the schools, I add, if here and there a few lyric odes, or pieces of satires, or some episodes of *heroic* verse, with here and there an epigram of *Martial*, all which shall be clear and pure from the stains of vice and impiety, and which may inspire the mind with noble sentiments, fire the fancy with bright and warm ideas, or teach lessons of morality and prudence, were chosen out of those ancient *Roman* writers for the use of the schools, and were collected and printed in one moderate

volume, or two at the most, it would be abundantly sufficient provision out of the *Roman* poets for the instruction of boys in all that is necessary in that age of life.

SURELY *Juvenal* himself would not have the face to vindicate the masters who teach boys his 6th *satire*, and many paragraphs of several others, when he himself has charged us,

*Nil dictu fœdum, visuque hæc limina tangat
Intra quæ puer est.* Sat. 14.

Suffer no lewdness, nor indecent speech,
Th' apartment of the tender youth to reach.

DRYDEN.

Thus far in answer to the foregoing question.

But I retire; for Mr. *Clarke* of *Hull*, in his treatise of *Education*, and Mr. *Philips* preceptor to the duke of *Cumberland*, have given more excellent directions for learning *Latin*.

XIX. WHEN a language is learnt, if it be of any use at all, it is pity it should be forgotten again. It is proper therefore to take all just opportunities to read something frequently in that language, when other necessary and important studies will give you leave. As in learning any tongue, dictionaries which contain words and phrases should

should be always at hand: so they should be ever kept within reach by persons who would remember a tongue which they have learnt. Nor should we at any time content ourselves with a doubtful guess at the sense or meaning of any words which occur, but consult the *dictionary*, which may give us certain information, and thus secure us from mistake. It is meer sloth which makes us content ourselves with uncertain guesses; and indeed this is neither safe nor useful for persons who would learn any language or science, or have a desire to retain what they have acquired.

XX. WHEN you have learnt one or many languages ever so perfectly, take heed of priding yourself in these acquisitions: they are but mere treasures of *words*, or instruments of true and solid knowledge, and whose chief design is to lead us into an acquaintance with *things*, or to enable us the more easily to convey those ideas, or that knowledge to others. An acquaintance with the various tongues is nothing else, but a relief against the mischief which the building of *Babel* introduced: and were I master of as many languages as were spoken at *Babel*, I should make but a poor pretence to true learning or knowledge, if I had not clear and distinct *ideas*, and useful notions in my head under the *words* which my tongue could pronounce. Yet so un-

I 3 happy

happy a thing is human nature, that this sort of knowledge of sounds and syllables is ready to puff up the mind with vanity, more than the most valuable and solid improvements of it. The pride of a grammarian or a critic, generally exceeds that of a philosopher.

C H A P. VIII.

Of enquiring into the Sense and Meaning of any Writer or Speaker, and especially the Sense of the Sacred writings.

IT is a great unhappiness that there is such an ambiguity in words and forms of speech, that the same sentence may be drawn into different significations; whereby it comes to pass, that it is difficult sometimes for the reader exactly to hit upon the ideas which the writer or speaker had in his mind. Some of the best *rules* to direct us herein are such as these.

I. BE well acquainted with the *tongue* itself, or *language* wherein the author's mind is exprest. Learn not only the true meaning of each word, but the sense which
those

those words obtain when placed in such a particular *situation* and *order*. Acquaint yourself with the peculiar *power and emphasis* of the several modes of speech, and the various idioms of the tongue. The *secondary ideas* which custom hath super-added to many words, should also be known, as well as the particular and *primary meaning* of them, if we would understand any writer. See *Logic*, Part I. Chap. 4. § 3.

II. CONSIDER the signification of those words and phrases, more especially in the *same nation*, or near the same *age* in which that writer lived, and in what sense they are used by authors of the *same nation, opinion, sect, party, &c.*

UPON this account, we may learn to interpret several phrases of the New Testament out of that version of the *Hebrew Bible* into *Greek*, which is called the *Septuagint*; for though that version be very imperfect and defective in many things, yet it seems to me evident, that the holy writers of the New Testament made use of that version many times in their citation of texts out of the Bible.

III. COMPARE the words and phrases in *one place of an author*, with the same or kindred words and phrases used in *other places* of the same author, which are generally called *parallel places*; and as one expression explains another which is like it,

so sometimes a contrary expression will explain its contrary. Remember always, that a writer best interprets himself; and as we believe the Holy Spirit to be the supreme agent in the writings of the Old Testament and the New, he can best explain himself. Hence that theological rule arises, that *scripture is the best interpreter of scripture*; and therefore *concordances* which shew us parallel places, are of excellent use for interpretation.

IV. CONSIDER the *subject* of which the author is treating, and by comparing other places where he treats of the *same subject*, you may learn his sense in the place which you are reading, though some of the terms which he uses in those two places may be very different.

AND on the other hand, if the author uses the same words where the subject of which he treats is *not just the same*, you cannot learn his sense by comparing those two places, though the mere words may seem to agree: for some authors, when they are treating of a quite *different subject*, may use perhaps the *same words* in a very *different sense*, as St. Paul does the words *faith*, and *law*, and *righteousness*.

V. OBSERVE the *scope and design* of the writer: enquire into his aim and end in that book, or section, or paragraph, which will help to explain particular sentences:
for

for we suppose a wise and judicious writer directs his expressions generally toward his designed end.

VI. WHEN an author speaks of any subject *occasionally*, let his sense be explained by those places where he treats of it *distinctly* and *professedly*: where he treats of any subject in *mystical* or *metaphorical* terms, explain them by other places, where he treats of the same subject in terms that are *plain and literal*: where he speaks in an *oratorical*, *affecting*, or *persuasive* way, let this be explained by other places where he treats of the same theme in a *doctrinal* or *instructive* way: where the author speaks more strictly, and *particularly* on any theme, it will explain the more loose and *general* expressions: where he treats more *largely*, it will explain the *shorter hints* and *brief intimations*: and wheresoever he writes more *obscurely*, search out some more *perspicuous* passages in the same writer, by which to determine the sense of that obscurer language.

VII. CONSIDER not only the *person* who is introduced *speaking*, but the *persons to whom* the speech is directed, the circumstances of *time* and *place*, the *temper and spirit of the speaker*, as well as the *temper and spirit of the hearers*: in order to interpret scripture well, there needs a good acquaintance with the *Jewish* customs,
some

some knowledge of the antient *Roman* and *Greek* times and manners, which sometimes strike a strange and surprising light upon passages which before were very obscure.

VIII. In particular propositions, the sense of an author may be sometimes known by the *inferences* which he draws from them; and all those senses may be excluded which will not allow of that interference.

NOTE, This *rule* indeed is not always certain in reading and interpreting human authors, because they may mistake in drawing their inferences; but in explaining scripture it is a *sure rule*; for the sacred and inspired writers always make just inferences from their own propositions. Yet even in them we must take heed we do not mistake an allusion for an inference, which is many times introduced almost in the same manner.

IX. If it be a matter of controversy, the true sense of the author is sometimes known by the *objections* that are brought against it. So we may be well assured, the Apostle speaks against our *justification in the sight of God by our own works of holiness*, in the 3d, 4th and 5th chapters of the Epistle to the *Romans*, because of the *objection* brought against him in the beginning of the 6th chapter, (*viz.*) *What shall we say then? shall we continue in sin that grace may abound?* Which objection could never have been raised,

raised, if he had been proving our *justification by our own works of righteousness*.

X. IN matters of dispute, take heed of *warping* the sense of the writer to *your own opinion*, by any latent prejudices of *self-love* and a *party spirit*. It is this reigning principle of prejudice and party, that has given such a variety of senses both to the sacred writers and others, which would never have come into the mind of the reader, if he had not laboured under some such prepossessions.

XI. FOR the same reason take heed of the prejudices of *passion, malice, envy, pride* or *opposition* to an author, whereby you may be easily tempted to put a *false and invidious sense* upon his words. Lay aside therefore a carping spirit, and read even an adversary with attention and diligence, with an honest design to find out his true meaning; do not snatch at little lapses and appearances of mistake, in opposition to his declared and avowed meaning; nor impute any sense or opinion to him which he denies to be his opinion, unless it be proved by the most plain and express language.

LASTLY, Remember that you *treat every author, writer or speaker, just as you yourselves would be willing to be treated by others*, who are searching out the meaning of what you write or speak: and maintain
upon

upon your spirit an awful sense of the presence of God, who is the judge of hearts, and will punish those who by a base and dishonest turn of mind wilfully pervert the meaning of the sacred writers, or even of common authors, under the influence of culpable prejudices. See more, *Logic*, Part I. Chap. 6. § 3. *Directions concerning the Definition of Names.*

CHAP. IX.

Rules of IMPROVEMENT by CONVERSATION.

IF we would improve our minds by *conversation*, it is a great happiness to be acquainted with persons wiser than ourselves. It is a piece of useful advice therefore, to get the favour of their conversation frequently, as far as circumstances will allow: and if they happen to be a little reserved, use all obliging methods to draw out of them what may increase your own knowledge.

II. **W**HATSOEVER company you are in, waste not the time in trifle and impertinence. If you spend some hours amongst children, talk with them according to their capacity;

capacity; mark the young buddings of infant reason; observe the different motions and distinct workings of the animal and the mind, as far as you can discern them; take notice by what degrees the little creature grows up to the use of his reasoning powers, and what early prejudices beset and endanger his understanding. By this means you will learn how to address yourself to children for their benefit, and perhaps you may derive some useful philosophemes or theorems, for your own entertainment.

III. IF you happen to be in company with a *merchant* or a *sailor*, a *farmer* or a *mechanic*, a *milk-maid* or a *spinster*, lead them into a discourse of the matters of their own peculiar province or profession; for every one knows, or should know, his own business best. In this sense a common mechanic is wiser than a philosopher. By this means you may gain some improvement in knowledge from every one you meet.

IV. *CONFINE* not yourself always to one sort of company, or to persons of the same party or opinion, either in matters of learning, religion, or the civil life, lest if you should happen to be nursed up or educated in early mistake, you should be confirmed and established in the same mistake, by conversing only with persons of the same sentiments. A free and general conversation with men of very various countries,
and

and of different parties, opinions, and practices (so far as it may be done safely) is of excellent use to undeceive us in many wrong judgments which we may have framed, and to lead us into juster thoughts. It is said, when the King of *Siam*, near *China*, first conversed with some *European* merchants, who sought the favour of trading on his coast, he enquired of them some of the common appearances of summer and winter in their country; and when they told him of water growing so hard in their rivers, that men, and horses, and laden carriages passed over it, and that rain sometimes fell down as white and light as feathers, and sometimes almost as hard as stones, he would not believe a syllable they said, for *ice*, *snow*, and *hail*, were names and things utterly unknown to him, and to his subjects in that hot climate: he renounced all traffic with such shameful liars, and would not suffer them to trade with his people. See here the natural effects of gross ignorance.

CONVERSATION with foreigners on various occasions, has a happy influence to enlarge our minds, and to set them free from many errors and gross prejudices we are ready to imbibe concerning them. *Domicillus* has never travelled five miles from his mother's chimney, and he imagines all outlandish men are *Papishes*, and worship nothing but a cross. *Tityrus* the shepherd,
was

was bred up all his life in the country, and never saw *Rome*; he fancied it to be only a huge village, and was therefore infinitely surprised to find such palaces, such streets, such glittering treasures and gay magnificence, as his first journey to the city shewed him, and with wonder he confesses his folly and mistake.

So *Virgil* introduces a poor shepherd,
Urbem quam dicunt Romam, Melibæe, putavi
Stultus ego huic nostræ similem, quo sæpe
solemus
Pastores ovium teneros depellere fætus, &c.

Thus Englished :

Fool that I was, I thought imperial Rome
Like market-towns, where once a week we
come,
And thither drive our tender lambs from
home.

CONVERSATION would have given *Tityrus* a better notion of *Rome*, though he had never happened to travel thither.

V. IN mixed company among acquaintance and strangers, endeavour to learn something from all. Be swift to hear, but be cautious of your tongue, lest you betray your ignorance, and perhaps offend some of those who are present too. The scripture severely censures those who *speakevil of the things they know not*. Acquaint yourself therefore sometimes

sometimes with persons and parties which are far distant from your common life and customs : this is a way whereby you may form a wiser opinion of men and things.

Prove all things, and hold fast that which is good, is a divine rule, and it comes from the Father of light and truth. But young persons should practise it indeed with due limitation and under the eye of their elders.

VI. *BE not frightened nor provoked at opinions different from your own.* Some persons are so confident they are in the right, that they will not come within the hearing of any notions but their own : they canton out to themselves a little province in the intellectual world, where they fancy the light shines, and all the rest is darkness. They never venture into the ocean of knowledge, nor survey the riches of other minds, which are as solid and as useful, and perhaps are finer gold than what they ever possessed. Let not men imagine there is no certain truth but in the sciences which they study, and amongst that party in which they were born and educated.

VII. *BELIEVE that it is possible to learn something from persons much below yourself.* We are all short-sighted creatures ; our views are also narrow and limited ; we often see but one side of a matter, and do not extend our sight far and wide enough
to

to reach every thing that has a connexion with the thing we talk of: *we see but in part, and know but in part*, therefore it is no wonder we form not right conclusions, because we do not survey the whole of any subject or argument. Even the proudest admirer of his own parts might find it useful to consult with others, though of inferior capacity and penetration. We have a different prospect of the same thing (if I may so speak) according to the different position of our understandings towards it: a weaker man may sometimes light on notions which have escaped a wiser, and which the wiser man might make a happy use of, if we would condescend to take notice of them.

VIII. IT is of considerable advantage when we are pursuing any difficult point of knowledge, *to have a society of ingenious correspondents at hand, to whom we may propose it*: for every man has something of a different genius and a various turn of mind, whereby the subject proposed will be shown in all its lights, it will be represented in all its forms, and every side of it be turned to view, that a juster judgment may be framed.

IX. To make conversation more valuable and useful, whether it be in a designed or accidental visit, among persons of the same or of different sexes, after the necessary salutations are finished, and the stream of com-

mon talk begins to hesitate, or runs flat and low, let some one person take a book which may be agreeable to the whole company, and by common consent let him read in it ten lines, or a paragraph or two, or a few pages, till some word or sentence gives an occasion for any of the company to offer a thought or two relating to that subject. Interruption of the reader should be no blame, for conversation is the business; whether it be to confirm what the author says, or to improve it, to enlarge upon or to correct it, to object against it, or to ask any question that is a-kin to it; and let every one that please add their opinion and promote the conversation. When the discourse sinks again, or diverts to trifles, let him that reads pursue the page, and read on further paragraphs or pages, till some occasion is given by a word or sentence for a new discourse to be started, and that with the utmost ease and freedom. Such a method as this would prevent the hours of a visit from running all to waste; and by this means even among scholars, they will seldom find occasion for that too just and bitter reflection, *I have lost my time in the company of the learned.*

By such practice as this, young ladies may very honourably and agreeably improve their hours, while one applies herself to reading, the others employ their attention,
even

even among the various artifices of the needle: but let all of them make their occasional remarks or enquiries. This will guard a great deal of that precious time from modish trifling impertinence or scandal, which might otherwise afford matter for painful repentance.

— OBSERVE this *rule in general*, whenever it lies in your power to lead the conversation, *let it be directed to some profitable point of knowledge or practice*, so far as may be done with decency; and let not the discourse and the hours be suffered to run loose without aim or design: and when a subject is started, pass not hastily to another, before you have brought the present theme or discourse to some tolerable issue, or a joint consent to drop it.

X. *ATTEND with sincere diligence while any one of the company is declaring his sense of the question proposed*; hear the argument with patience, though it differ ever so much from your sentiments, for you yourself are very desirous to be heard with patience by others who differ from you. Let not your thoughts be active and busy all the while to find out something to contradict, and by what means to oppose the speaker, especially in matters which are not brought to an issue. This is a frequent and unhappy temper and practice. You should rather be intent and solicitous to take up the mind

and meaning of the speaker, zealous to seize and approve all that is true in his discourse; nor yet should you want courage to oppose where it is necessary; but let your modesty and patience and a friendly temper, be as conspicuous as your zeal.

XI. *WHEN a man speaks with much freedom and ease, and gives his opinion in the plainest language of common sense, do not presently imagine you shall gain nothing by his company.* Sometimes you will find a person who in his conversation or his writings delivers his thoughts in so plain, so easy, so familiar and perspicuous a manner, that you both understand and assent to every thing he saith, as fast as you read or hear it: hereupon some hearers have been ready to conclude in haste, surely *this man saith none but common things, I knew as much before, or I could have said all this myself.* This is a frequent mistake. *Pellucido* was a very great genius; when he spoke in the senate he was wont to convey his ideas in so simple and happy a manner, as to instruct and convince every hearer, and to enforce the conviction through the whole illustrious assembly; and that with so much evidence, that you would have been ready to wonder, that every one who spoke had not said the same things: but *Pellucido* was the only man that could do it, the only speaker who had attained

attained this art and honour. Such is the writer of whom *Horace* would say,

———*Ut sibi quivis,
Speret idem, sudet multum, frustra que laboret
Ausus idem.* De Art. Poët.

*Smooth be your style, and plain and natural,
To strike the sons of Wapping or Whitehall.
While others think this easy to attain,
Let them but try, and with their utmost pain }
They'll sweat and strive to imitate in vain. }*

XII. If any thing seem dark in the discourse of your companion, so that you have not a clear idea of what is spoken, endeavour to obtain a clearer conception of it by a decent manner of enquiry. Do not charge the speaker with obscurity, either in his sense or his words, but intreat his favour to relieve your own want of penetration, or to add an enlightening word or two, that you may take up his whole meaning.

If difficulties arise in your mind, and constrain your dissent to the things spoken, represent what objections some persons would be ready to make against the sentiments of the speaker, without telling him you oppose. This manner of address carries something more modest and obliging in it, than to appear to raise objections of your own by way of contradiction to him that spoke.

XIII. WHEN you are forced to differ from him who delivers his sense on any point, yet *agree as far as you can*, and *represent how far you agree*; and if there be any room for it, explain the words of the speaker in such a sense to which you can in general assent and so agree with him: or at least by a small addition or alteration of his sentiments shew your own sense of things. It is the practice and delight of a candid hearer, to make it appear how unwilling he is to differ from him that speaks. Let the speaker know that it is nothing but truth constrains you to oppose him, and let the difference be always expressed in few and civil, and chosen words, such as give the least offence.

AND be careful always to take *Solomon's* rule with you, and let your correspondent fairly finish his speech before you reply; for *he that answereth a matter before he heareth it*, it is *jolly and shame unto him*. Prov. xviii. 13.

A LITTLE watchfulness, care and practice in younger life, will render all these things more easy, familiar, and natural to you, and will grow into habit.

XIV. As you should carry about with you a constant and sincere sense of your own ignorance, *so you should not be afraid nor ashamed to confess this ignorance*, by taking all proper opportunities to *ask and enquire*
for

for farther information; whether it be the meaning of a word, the nature of a thing, the reason of a proposition, the custom of a nation, &c. never remain in ignorance for want of asking.

MANY a person had arrived at some considerable degree of knowledge, if he had not been full of self-conceit, and imagined that he had known enough already, or else was ashamed to let others know that he was unacquainted with it. God and man are ready to teach the meek, the humble, and the ignorant; but he that fancies himself to know any particular subject well, or that will not venture to ask a question about it, such a one will not put himself into the way of improvement by enquiry and diligence, *A fool may be wiser in his own conceit than ten men who can render a reason*, and such a one is very likely to be an everlasting fool; and perhaps also it is a silly shame renders his folly incurable.

Stultorum incurata pudor malus ulcera celat.
Hor. Epist. 16. Lib. I.

In *English* thus,
If fools have ulcers, and their pride conceal 'em;
They must have ulcers still, for none can heal 'em.

XI. *BE not too forward, especially in the younger part of life, to determine any*
K 4 *question*

question in company with an infallible and peremptory sentence, nor speak with assuming airs, and with a decisive tone of voice. A young man in the presence of his elders should rather hear and attend, and weigh the arguments which are brought for the proof or refutation of any doubtful proposition: and when it is your turn to speak, propose your thoughts rather in way of enquiry. By this means your mind will be kept in a fitter temper to receive truth, and you will be more ready to correct and improve your own sentiments, where you have not been too positive in affirming them. But if you have magisterially decided the point, you will find a secret unwillingness to retract, though you should feel an inward conviction that you were in the wrong.

XVI. IT is granted indeed, that a season may happen, when some bold pretender to science, may assume haughty and positive airs to assert and vindicate a gross and dangerous error, or to renounce and vilify some very important truth: and if he has a popular talent of talking, and there be no remonstrance made against him, the company may be tempted too easily to give their assent to the impudence and infallibility of the presumer. They may imagine a proposition so much vilified can never be true, and that a doctrine which is so boldly censured and renounced can never be defended.

Weak

Weak minds are too ready to persuade themselves, that a man would never talk with so much assurance unless he were certainly in the right and could well maintain and prove what he said. By this means truth itself is in danger of being betrayed or lost, if there be no opposition made to such a pretending talker.

Now in such a case even a wise and a modest man may assume airs too, and repel insolence with its own weapons. There is a time as *Solomon* the wisest of men teaches us, when *a fool should be answered according to his folly, lest he be wise in his own conceit*, and lest others too easily yield up their faith and reason to his imperious dictates. Courage and positivity are never more necessary than on such an occasion. But it is good to join some argument with them of real and convincing force, and let it be strongly pronounced too.

WHEN such a resistance is made, you shall find some of these bold talkers will draw in their horns, when their fierce and feeble pushes against truth and reason are repelled with pushing and confidence. It is pity indeed that truth should ever need such sort of defences; but we know that a triumphant assurance hath sometimes supported gross falsehoods, and a whole company have been captivated to error by this means, till some man with equal assurance
has

has rescued them. It is pity that any momentous point of doctrine should happen to fall under such reproaches, and require such a mode of vindication : though if I happen to hear it, I ought not to turn my back and sneak off in silence, and leave the truth to lie baffled, bleeding and slain. Yet I must confess, I should be glad to have no occasion ever given me to fight with any man at this sort of weapons, even though I should be so happy as to silence his insolence, and obtain an evident victory.

XVII. *BE not fond of disputing every thing* PRO and CON, nor indulge yourself to shew your talent of attacking and defending. A *logic* which teaches nothing else, is little worth. This temper and practice will lead you just so far out of the way of knowledge, and divert your honest enquiry after the truth which is debated or sought. In set disputes, every little straw is often laid hold on to support our own cause ; every thing that can be drawn in any way to give colour to our argument is advanced, and that perhaps with vanity and ostentation. This puts the mind out of a proper posture to seek and receive the truth.

XVIII. *Do not bring a warm party-spirit into free conversation*, which is designed for mutual improvement in the search of truth. Take heed of allowing yourself in
those

those self-satisfied assurances, which keep the doors of the understanding barred fast against the admission of any new sentiments. Let your soul be ever ready to hearken to further discoveries, from a constant and ruling consciousness of our present fallible and imperfect state; and make it appear to your friends, that it is no hard task for you to learn and pronounce those little words, *I was mistaken*, how hard soever it be for the bulk of mankind to pronounce them.

XIX. As you may sometimes raise enquiries for your own instruction and improvement, and draw out the learning, wisdom and fine sentiments of your friends, who perhaps may be too reserved or modest; so at other times if you perceive a person unskilful in the matter of debate, *you may by questions aptly proposed in the Socratic method, lead him into a clearer knowledge of the subject*: then you become his instructor in such a manner as may not appear to make yourself his superior.

XX. *TAKE heed of affecting always to shine in company above the rest*, and to display the riches of your own understanding or your oratory, as though you would render yourself admirable to all that are present. This is seldom well taken in polite company; much less should you use such forms of speech as would insinuate the ignorance

norance or dulness of those with whom you converse.

XXI. THOUGH you should not affect to flourish in a copious harangue and diffusive style in company, yet *neither should you rudely interrupt and reproach him that happens to use it*: but when he has done speaking, reduce his sentiments into a more contracted form; not with a shew of correcting, but as one who is doubtful whether you hit upon his true sense or no. Thus matters may be brought more easily from a wild confusion into a single point, questions may be sooner determined, and difficulties more easily removed.

XXII. BE not so ready to charge ignorance, prejudice, and mistake upon others, as you are to suspect yourself of it: and in order to show how free you are from prejudices, learn to bear contradiction with patience: let it be easy to you to hear your own opinion strongly opposed, especially in matters which are doubtful and disputable amongst men of sobriety and virtue. Give a patient hearing to arguments on all sides, otherwise you give the company occasion to suspect that it is not the evidence of truth has led you into this opinion, but some lazy anticipation of judgment; some beloved presumption, some long and rash possession of a party scheme, in which you
desire

desire to rest undisturbed. If your assent has been established upon just and sufficient grounds, why should you be afraid to let the truth be put to the trial of argument?

XXIII. *BANISH* utterly out of all conversation, and especially out of all learned and intellectual conference, every thing that tends to provoke passion, or raise a fire in the blood. Let no sharp language, no noisy exclamation, no sarcasms or biting jests be heard among you; no perverse or invidious consequences be drawn from each other's opinions, and imputed to the person: let there be no wilful perversion of another's meaning; no sudden seizure of a lapsed syllable to play upon it, nor any abused construction of an innocent mistake: suffer not your tongue to insult a modest opponent that begins to yield; let there be no crowing and triumph, even where there is evident victory on your side. All these things are enemies to friendship, and the ruin of free conversation. The impartial search of truth requires all calmness and serenity, all temper and candour: mutual instruction can never be attained in the midst of passion, pride and clamour, unless we suppose in the midst of such a scene there is a loud and penetrating lecture read by both sides on the folly and shameful infirmities of human nature.

XXIV. WHENSOEVER therefore any unhappy word shall arise in company that might give you a reasonable disgust, *quash the rising resentment, be it ever so just*, and command your soul and your tongue into silence, lest you cancel the hopes of all improvement for that hour, and transform the learned conversation into the mean and vulgar form of reproaches and railing. The man who begun to break the peace in such a society, will fall under the shame and conviction of such a silent reproof, if he has any thing ingenuous about him. If this should not be sufficient, let a grave admonition, or a soft and gentle turn of wit, with an air of pleasantry, give the warm disputer an occasion to stop the progress of his indecent fire, if not to retract the indecency and quench the flame.

XXV. *INURE yourself to a candid and obliging manner in all your conversation, and acquire the art of pleasing address, even when you teach as well as when you learn, and when you oppose as well as when you assert or prove.* This degree of politeness is not to be attained without a diligent attention to such kind of directions as are here laid down, and a frequent exercise and practice of them.

XXVI. IF you would know *what sort of companions you should select for the cultivation and advantage of the mind*, the general
rule

rule is, choose such as by their brightness of parts and their diligence in study, or by their superior advancement in learning, or peculiar excellency in any art, science, or accomplishment, divine or human, may be capable of administering to your improvement; and be sure to maintain and keep some due regard to their moral character always, lest while you wander in quest of intellectual gain, you fall into the contagion of irreligion and vice. No wise man would venture into a house infected with the plague, in order to see the finest collections of any *virtuoso* in *Europe*.

XXVII. NOR is it every sober person of your acquaintance, no, nor every man of bright parts, or rich in learning, that is fit to engage in free conversation for the enquiry after truth. Let a person have ever so illustrious talents, yet *he is not a proper associate for such a purpose, if he lie under any of the following infirmities.*

(1.) IF he be exceedingly reserved, and hath either no inclination to discourse, or no tolerable capacity of speech and language for the communication of his sentiments.

(2.) IF he be haughty and proud of his knowledge, imperious in his airs, and is always fond of imposing his sentiments on all the company.

(3.) IF he be positive and dogmatical in his own opinions, and will dispute to the end;

end; if he will resist the brightest evidence of truth rather than suffer himself to be overcome, or yield to the plainest and strongest reasonings.

(4.) IF he be one who always affects to outshine all the company, and delights to hear himself talk and flourish upon a subject, and make long harangues, while the rest must be all silent and attentive.

(5.) IF he be a person of a whiffling and unsteady turn of mind, who cannot keep close to a point of controversy, but wanders from it perpetually, and is always solicitous to say something, whether it be pertinent to the question or no.

(6.) IF he be fretful and peevish, and given to resentment upon all occasions; if he knows not how to bear contradiction, or is ready to take things in a wrong sense; if he is swift to feel a supposed offence, or to imagine himself affronted, and then break out into a sudden passion, or retain silent and sullen wrath.

(7.) IF he affect wit on all occasions, and is full of his conceits and puns, quirks or quibbles, jests and repartees; these may agreeably entertain and animate an *hour of mirth*, but they have no place in the *search after truth*.

(8.) IF he carry always about him a sort of craft, and cunning, and disguise, and act rather like a spy than a friend. Have

a care of such a one as will make an ill use of freedom in conversation, and immediately charge heresy upon you, when you happen to differ from those sentiments which authority or custom has established.

IN short, you should avoid the man in such select conversation, who practises any thing that is unbecoming the character of a sincere, free and open searcher after truth.

Now though you may pay all the relative duties of life to persons of these unhappy qualifications, and treat them with decency and love, so far as religion and humanity oblige you, yet take care of entering into a free debate of matters of truth or falshood in their company, and especially about the principles of religion. I confess, if a person of such a temper happens to judge and talk well on such a subject, you may hear him with attention, and derive what profit you can from his discourse; but he is by no means to be chosen for a free conference in matters of enquiry and knowledge.

XXVIII. WHILE I would persuade you to beware of such persons, and abstain from too much freedom of discourse amongst them, it is very natural to infer that *you should watch against the working of these evil qualities in your own breast*, if you happen to be tainted with any of them yourself. Men of learning and ingenuity will justly avoid your acquaintance, when

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they

they find such an unhappy and unfociable temper prevailing in you.

XXIX. To conclude: when you retire from company, then *converse with yourself in solitude, and enquire what you have learnt for the improvement of your understanding, or for the rectifying your inclinations*, for the increase of your virtues, or the meliorating your conduct and behaviour in any future parts of life. If you have seen some of your company candid, modest, humble in their manner, wise and sagacious, just and pious in their sentiments, polite and graceful, as well as clear and strong in their expression, and universally acceptable and lovely in their behaviour, endeavour to impress the idea of all these upon your memory, and treasure them up for your imitation.

XXX. If the laws of reason, decency, and civility, have not been well observed amongst your associates, *take notice of those defects for your own improvement*: and from every occurrence of this kind, remark something to imitate or to avoid, in elegant, polite, and useful conversation. Perhaps you will find that some persons present have really displeased the company by an excessive and too visible an affectation to please, *i. e.* by giving loose to servile flattery, or promiscuous praise; while others were as ready to oppose and contradict

dict every thing that was said. Some have deserved just censure for a morose and affected taciturnity, and others have been anxious and careful lest their silence should be interpreted a want of sense, and therefore they have ventured to make speeches, though they had nothing to say which was worth hearing. Perhaps you will observe, that one was ingenious in his thoughts and bright in his language, but he was so top-full of himself, that he let it spill on all the company; that he spoke well indeed, but that he spoke too long, and did not allow equal liberty or time to his associates. You will remark that another was full-charged to let out his words before his friend had done speaking, or impatient to the least opposition to any thing he said. You will remember that some persons have talked at large, and with great confidence, of things which they understood not, and others counted every thing tedious and intolerable that was spoken upon subjects out of their sphere, and they would fain confine the conference entirely within the limits of their own narrow knowledge and study. The errors of conversation are almost infinite.

XXXI. By a review of such irregularities as these, you may learn to avoid those follies and pieces of ill conduct which spoil good conversation, or make it less agree-

able and less useful ; and by degrees you will acquire that delightful and easy manner of address and behaviour in all useful correspondences, which may render your company every where desired and beloved ; and at the same time among the best of your companions you may make the highest improvement in your own intellectual acquisitions, that the discourse of mortal creatures will allow, under all our disadvantages in this sorry state of mortality. But there is a day coming, when we shall be seized away from this lower class in the school of knowledge, where we labour under the many dangers and darkneses, the errors and the incumbrances of flesh and blood, and our conversation shall be with angels, and more illuminated spirits in the upper regions of the universe.

C H A P. X.

Of D I S P U T E S.

I. **U**NDER the general head of *Conversation for the Improvement of the Mind*, we may rank the practice of *disputing*; that is, when two or more persons appear to maintain different sentiments, and defend their own, or oppose the other's opinion in alternate discourse by some methods of argument.

II. As these *disputes* often arise in good earnest, where the two contenders do really believe the different propositions which they support; so sometimes they are appointed as mere trials of skill in *academies*, or schools, by the students: sometimes they are practised, and that with apparent fervour in courts of *judicature* by lawyers, in order to gain the fees of their different clients, while both sides perhaps are really of the same sentiment with regard to the cause which is tried.

III. I N common conversation, *disputes* are often managed without any forms of regularity or order, and they turn to good or evil purposes, chiefly according to the temper of the disputants. They may sometimes be successful to search out truth,

sometimes effectual to maintain truth, and convince the mistaken, but at other times a dispute is a mere scene of battle in order to victory and vain triumph.

IV. THERE are some few *general rules* which should be observed in all debates whatsoever, if we would find out truth by them, or convince a friend of his error, even though they be not managed according to any settled forms of disputation: and as there are almost as many opinions and judgments of things as there are persons, so when several persons happen to meet and confer together upon any subject, they are ready to declare their different sentiments, and support them by such reasonings as they are capable of. This is called *debating*, or *disputing*, as is above described.

V. WHEN persons begin a debate, *they should always take care that they are agreed in some general principles or propositions*, which either more nearly or remotely affect the question in hand; for otherwise they have no foundation or hope of convincing each other: they must have some common ground to stand upon while they maintain the contest.

WHEN they find they agree in some remote propositions, then let them search farther, and enquire how near they approach to each others sentiments; and whatsoever propositions they agree in, let these lay a
foun-

foundation for the mutual hope of conviction. Hereby you will be prevented from running at every turn to some original and remote propositions and axioms, which practice both entangles and prolongs a dispute. As for instance, if there was a debate proposed betwixt a *protestant* and a *papist*, whether there be such a place as *purgatory*? Let them remember that they both agree in this point, that *Christ has made satisfaction or atonement for sin*, and upon this ground let them both stand, while they search out the controverted doctrine of *purgatory* by way of conference or debate.

VI. THE *question should be cleared from all doubtful terms and needless additions*; and all things that belong to the *question* should be expressed in plain and intelligible language. This is so necessary a thing, that without it, men will be exposed to such sort of ridiculous contests as was found one day between the two unlearned combatants *Sartor* and *Sutor*, who assaulted and defended the doctrine of *transubstantiation* with much zeal and violence: but *Latino* happening to come into their company, and enquiring the subject of their dispute, asked each of them what he meant by that long hard word *transubstantiation*. *Sutor* readily informed him that he understood *bowing at the name of Jesus*. But *Sartor* assured him, that he meant nothing but *bowing at the*

high altar : “ No wonder then, said *Latino*,
 “ that you cannot agree, when you neither
 “ understand one another, nor the word
 “ about which you contend.” I think the
 whole family of the *Sartors* and *Sutors*
 would be wiser if they avoided such kind
 of debates, till they understood the terms
 better. But alas ! even their wives carry on
 such conferences ; the other day one was
 heard in the street, explaining to her less
 learned neighbour the meaning of *metaphy-*
sical science ; and she assured her, that as
physics were medicines for the body, so *me-*
taphysics was *physic* for the soul : upon this
 they went on to dispute the point how far
 the *divine* excelled the *doctor*.

Auditum admissi risum teneatis amici ?
Ridentem dicere verum Quid vetat ? Hor.

Can it be faulty to repeat
 A dialogue that walk'd the street ?
 Or can my gravest friends forbear
 A laugh, when such disputes they hear ?

VII. AND not only the *sense and mean-*
ing of the words used in the *question* should
 be settled and adjusted between the dispu-
 tants, but the *precise point of enquiry* should
 be *distinctly fixed* ; the question in debate
 should be limited precisely to its special ex-
 tent, or declared to be taken in its more gene-
 ral

ral sense. As for instance, If two men are contending *whether civil government be of divine right or no*; here it must be observed, the question is not whether *monarchy* in one man, or a *republic* in multitudes of the people, or an *aristocracy* in a few of the chief, is appointed of God as necessary; but whether civil government in its most general sense, or in any form whatsoever, is derived from the will and appointment of God? Again, The point of enquiry should be limited further. Thus, the question is not *whether government comes from the will of God* by the light of *revelation*, for that is granted; but *whether it is derived from the will of God* by the light of *reason* &c. This sort of specification or limitation of the question, hinders and prevents the disputers from wandering away from the precise point of enquiry.

It is this trifling humour or dishonest artifice of changing the question, and wandering away from the first point of debate, which gives endless length to disputes, and causes both the disputants to part without any satisfaction. And one chief occasion of it is this; when one of the combatants feels his cause run low and fail, and is just ready to be confuted and demolished, he is tempted to step aside to avoid the blow, and betakes him to a different question; thus, if his adversary be not well aware of him,
he

he begins to entrench himself in a new fastness, and holds out the siege with a new artillery of thoughts and words. It is the pride of man which is the spring of this evil, and an unwillingness to yield up their own opinions, even to be overcome by truth itself.

VIII. KEEP this always therefore upon your mind, as an everlasting rule of conduct in your debates to find out truth, that *a resolute design, or even a warm affectation of victory, is the bane of all real improvement, and an effectual bar against the admission of the truth which you profess to seek.* This works with a secret, but a powerful and mischievous influence in every dispute, unless we are much upon our guard. It appears in frequent conversation: every age, every sex, and each party of mankind are so fond of being in the right, that they know not how to renounce this unhappy prejudice, this vain love of victory.

WHEN truth with bright evidence is ready to break in upon a disputant, and to overcome his objections and mistakes, how swift and ready is the mind to engage wit and fancy, craft and subtilty, to cloud and perplex and puzzle the truth, if possible? How eager is he to throw in some impertinent question to divert from the main subject? How swift to take hold of some
occasional

occasional word, thereby to lead the discourse off from the point in hand? So much afraid is human nature of parting with its errors, and being overcome by truth. Just thus a hunted *bare* calls up all the shifts that nature hath taught her, she treads back her mazes, crosses and confounds her former track, and uses all possible methods to divert the scent, when she is in danger of being seized and taken. Let *puss* practise what nature teaches; but would one imagine, that any rational being should take such pains to avoid truth, and to escape the improvement of his understanding?

IX. WHEN you come to a dispute in order to find out truth, *do not presume that you are certainly possessed of it before hand*. Enter the debate with a sincere design of yielding to reason, on which side soever it appears. Use no subtle arts to cloud and entangle the question; hide not yourself in doubtful words and phrases; do not affect little shifts and subterfuges to avoid the force of an argument; take a generous pleasure to espy the first rising beams of truth, though it be on the side of your opponent; endeavour to remove the little obscurities that hang about it, and suffer and encourage it to break out into open and convincing light; that while your opponent, perhaps, may gain the better of your reasonings, yet you yourself may triumph
over

over error, and I am sure that is a much more valuable acquisition and victory.

X. *WATCH* narrowly in every dispute, that your opponent does not lead you unwarily to grant some principle or proposition, which will bring with it a fatal consequence, and lead you insensibly into this sentiment, though it be far astray from the truth: and by this wrong step you will be, as it were, plunged into dangerous errors before you are aware. *Polonides* in free conversation led *Incauto* to agree with him in this plain proposition, that the *blessed God has too much justice in any case to punish * any being who is in itself innocent*; till he not only allowed it with an unthinking alacrity, but asserted it in most universal and unguarded terms. A little after, *Polonides* came in discourse to commend the virtues, the innocence, and the piety of our blessed Saviour; and thence inferred, *it was impossible that God should ever punish so holy a person who was never guilty of any crime*: then *Incauto* espied the snare, and found himself robbed and defrauded of the great doctrine of the atonement of the death of *Christ*, upon which he had placed his immortal hopes according to the gospel. This taught him to bethink himself what a dangerous

* The word *punish* here signifies, to bring some natural evil upon a person on account of moral evil done.

concession he had made in so universal a manner, that *God would never punish any being who was innocent*, and he saw it needful to recal his words, or to explain them better, by adding this reflection or limitation, *viz. Unless this innocent being were some way involved in another's sin, or stood as a voluntary surety for the guilty*: by this limitation he secured the great and blessed doctrine of the sacrifice of *Christ* for the sins of men, and learnt to be more cautious in his concessions for time to come

Two months ago *Fatalio* had almost tempted his friend *Fidens* to leave off prayer, and to abandon his dependence on the providence of God in the common affairs of life, by obtaining of him a concession of the like kind. Is it not evident to reason, says *Fatalio*, that God's immense scheme of transactions in the universe, was contrived and determined long before you and I were born? Can you imagine, my dear *Fidens*, that the blessed God changes his original contrivances, and makes new interruptions in the course of them so often as you and I want his aid, to prevent the little accidents of life, or to guard us from them? Can you suffer yourself to be persuaded, that the great Creator of this world takes care to support a bridge which was quite rotten, and to make it stand firm a few minutes longer till you had rode over it?

it? Or will he uphold a falling tower while we two were passing by it, that such worms as you and I are might escape the ruin?

BUT you say, *you prayed for his protection in the morning, and he certainly hears prayer*. I grant he knows it: but are you so fond and weak, said he, as to suppose that the universal Lord of all had such a regard to a word or two of your breath, as to make alterations in his own eternal scheme upon that account? Nor is there any other way whereby his providence can preserve you in answer to prayer, but by creating such perpetual interruptions and changes in his own conduct according to your daily behaviour.

I ACKNOWLEDGE, says *Fidens*, there is no other way to secure the doctrine of divine providence in all these common affairs; and therefore I begin to doubt, whether God does or ever will exert himself so particularly in our little concerns.

HAVE a care, good *Fidens*, that you yield not too far: take heed lest you have granted too much to *Fatalio*. Pray let me ask of you, could not the great God, who grasps and surveys all future and distant things in one single view, could not he from the beginning foresee your morning prayer for his protection, and appoint all second causes to concur for the support of that crazy *bridge*, or to make that old *tower* stand firm till you

had escaped the danger? Or could not he cause all the mediums to work so as to make it fall before you come near it? Can he not appoint all his own transactions in the universe, and every event in the natural world, in a way of perfect correspondence with his own fore-knowledge of all the events, actions and appearances of the moral world, in every part of it? Can he not direct every thing in nature, which is but his servant, to act in perfect agreement with his eternal prescience of our sins, or of our piety? And hereby all the glory of providence, and our necessary dependence upon it by faith and prayer, are as well secured, as if he interposed to alter his own scheme every moment.

LET me ask again: Did not he in his own counsels or decrees appoint thunders and lightnings, and earthquakes, to burn up and destroy *Sodom* and *Gomorrhah*, and turn them into a dead sea, just at the time when the iniquities of those cities were raised to their supreme height? Did he not ordain the fountains of the deep to be broken up, and overwhelming rains to fall down from heaven, just when a guilty world deserved to be drowned; while he took care of the security of righteous *Noah*, by an ark which should float upon that very deluge of waters? Thus, he can punish the criminal when he pleases, and reward the devout

devout worshipper in the proper season, by his original and eternal schemes of appointment, as well as if he interposed every moment anew. Take heed, *Fidens*, that you be not tempted away by such sophisms of *Fatalio*, to withhold prayer from God, and to renounce your faith in his providence.

REMEMBER this short and plain caution of the subtile errors of men. Let a snake but once thrust in his head at some small unguarded fold of your garment, and he will insensibly and unavoidably wind his whole body into your bosom, and give you a pernicious wound.

XI. ON the other hand, *when you have found your opponent make any such concession as may turn to your real advantage in maintaining the truth, be wise and watchful to observe it, and make a happy improvement of it.* *Rhapsodus* has taken a great deal of pains to detract from the honour of christianity, by sly insinuations, that the sacred writers are perpetually promoting virtue and piety by promises and threatenings; whereas *neither the fear of future punishment, nor the hope of future reward, can possibly be called good affections, or such as are the acknowledged springs and sources of all actions truly good.* He adds further, that *this fear, or this hope, cannot consist in reality with virtue or goodness, if it either stands as essential to any*
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moral performance, or as a considerable motive to any good action: and thus he would fain lead *Christians* to be ashamed of the gospel of *Christ*, because of its future and eternal promises and threatenings, as being inconsistent with his notion of virtue; for he supposes virtue should be so beloved and practised for the sake of its own beauty and loveliness, that all other motives arising from rewards or punishments, fear or hope, do really take away just so much from the very nature of virtue as their influence reaches to: and no part of those good practices are really valuable, but what arises from the mere love of virtue itself, without any regard to punishment or reward.

BUT observe in two pages afterwards, he grants that *this principle of fear of future punishment, and hope of future reward, how mercenary and servile soever it may be accounted, is yet in many circumstances a great advantage, security and support to virtue; especially where there is danger of the violence of rage or lust, or any counter-working passion to control and overcome the good affections of the mind.*

Now the rule and the practice of *Christianity*, or the gospel, as it is closely connected with future rewards and punishments, may be well supported by this concession. Pray, *Rhapsodus*, tell me, if every man in this present life, by the violence of

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some counter-working passion, may not have his good affections to virtue controlled or overcome? May not therefore his eternal fears and hopes be a great advantage, security and support to virtue in so dangerous a state and situation, as our journey through this world towards a better? And this is all that the defence of christianity necessarily requires.

AND yet further, let me ask our *rhapsodist*, “if you have nothing else, Sir, but the beauty and excellency, and loveliness of virtue to preach and flourish upon before such sorry and degenerate creatures as the bulk of mankind are, and you have no future rewards or punishments with which to address their hopes and fears, how many of these vicious wretches will you ever reclaim from all their varieties of profaneness, intemperance and madness? How many have you ever actually reclaimed by this smooth soft method, and these fine words? What has all that reasoning and rhetoric done which have been displayed by your predecessors the *Heathen* moralists, upon this excellency and beauty of virtue? What has it been able to do towards the reforming of a sinful world? Perhaps now and then a man of better natural mould has been a little refined, and perhaps also there may have been here and there a man restrained or recovered from injustice and knavery, from drunkenness

ness and lewdness, and vile debaucheries, by this fair reasoning and philosophy : but have the passions of revenge and envy, of ambition and pride, and the inward secret vices of the mind been mortified merely by this philosophical language? Have any of these men been made new creatures, men of real piety and love to God?

Go dress up all the virtues of human nature in all the beauties of your oratory, and declaim aloud on the praise of social virtue, and the amiable qualities of goodness, till your heart or your lungs ache, among the looser herds of mankind, and you will ever find, as your *Heathen* fathers have done before, that the wild passions and appetites of men are too violent to be restrained by such mild and filken language. You may as well build up a fence of straw and feathers to resist a cannon-ball, or try to quench a flaming grenado with a shell of fair water, as hope to succeed in these attempts. But an *eternal heaven* and an *eternal hell*, carry divine force and power with them : this doctrine from the mouth of *Christian* preachers has begun the reformation of multitudes : this gospel has recovered thousands among the nations from iniquity and death. They have been awakened by these awful scenes to begin religion, and afterwards their virtue has improved itself into superior and more refined

principles and habits by divine grace, and risen to high and eminent degrees, though not to a consummate state." The blessed God knows human nature much better than *Rhapsodus* doth, and has throughout his word appointed a more proper and more effectual method of address to it by the passions of hope and fear, by punishments and rewards.

IF you read on four pages further in these writings, you will find the author makes another concession. He allows that *the master of a family using proper rewards and gentle punishments towards his children, teaches them goodness, and by this help instructs them in a virtue which afterwards they practise upon other grounds, and without thinking of a penalty or a bribe: and this, says he, is what we call a liberal education and a liberal service.*

THIS new concession of that author may also be very happily improved in favour of *Christianity*. What are the best of men in this life? They are by no means perfect in virtue: we are all but children here under the great Master of the family, and he is pleased by hopes and fears, by mercies and corrections to instruct us in virtue, and to conduct us onward towards the sublimer and more perfect practice of it in the future world, where it shall be performed, as in his own language, perhaps *without think-*
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ing of penalties and bribes. And since he hath allowed that this conduct may be called *a liberal education*, and *a liberal service*, let christianity then be indulged the title of a *liberal education* also, and it is admirably fitted for such frail and sinful creatures, while they are training up towards the sublimer virtues of the heavenly state.

XII. *WHEN* you are engaged in a dispute with a person of very different principles from yourself, and you cannot find any ready way to prevail with him to embrace the truth by principles which you both freely acknowledge, you may fairly make use of his own principles to shew him his mistake, and thus convince or silence him, from his own concessions.

If your opponent should be a *Stoic* philosopher, or a *Jew*, you may pursue your argument in defence of some *Christian* doctrine or duty against such a disputant, by axioms or laws borrowed either from *Zeno* or *Moses*. And though you do not enter into the enquiry how many of the laws of *Moses* are abrogated, or whether *Zeno* was right or wrong in his philosophy; yet if from the principles and concession of your opponent, you can support your argument for the gospel of *Christ*, this has been always counted a fair treatment of an adversary, and it is called *Argumentum ad hominem*, or *Ratio ex concessis*. St. Paul sometimes

makes use of this sort of disputation, when he talks with *Jews* or *Heathen* philosophers; and at least he silences if not convinces them: which is sometimes necessary to be done against an obstinate and clamorous adversary, that just honour might be paid to truths which he knew were divine, and that the only true doctrine of salvation might be confirmed and propagated among sinful and dying men.

XIII. *YET* great care must be taken lest your debates break in upon your passions, and awaken them to take part in the controversy. When the opponent pushes hard, and gives just and mortal wounds to our own opinion, our passions are very apt to feel the strokes, and to rise in resentment and defence. *Self* is so mingled with the *sentiments* which we have chosen, and has such a tender feeling of all the opposition which is made to them, that *personal brawls* are very ready to come in as *seconds*, to succeed and finish the *dispute of opinions*. Then noise and clamour and folly appear in all their shapes, and chase reason and truth out of sight.

How unhappy is the case of frail and wretched mankind, in this dark or dusky state of strong passion and glimmering reason? How ready are we, when our passions are engaged in the dispute, to consider more what loads of nonsense and reproach we can lay

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lay upon our opponent, than what reason and truth require in the controversy itself. Dismal are the consequences mankind are too often involved in by this evil principle; it is this common and dangerous practice, that carries the heart aside from all that is fair and honest in our search after truth, or the propagation of it in the world. One would wish from one's very soul, that none of the *Christian* fathers had been guilty of such follies as these.

BUT St. *Jerome* fairly confesses this evil principle, in his apology for himself to *Pammachius*, “*that he had not so much regarded what was exactly to be spoken in the controversy he had in hand, as what was fit to lay a load on Jovinian.*” And indeed, I fear this was the vile custom of many of the writers even in the church-affairs of those times. But it will be a double scandal upon us in our more enlightened age, if we will allow ourselves in a conduct so criminal and dishonest. Happy souls, who keep such a sacred dominion over their inferior and animal powers, and all the influences of pride, and secular interest, that the sensitive tumults, or these vicious influences never rise to disturb the superior and better operations of the reasoning mind!

XIV. THESE *general directions* are necessary, or at least useful in all debates whatsoever, whether they arise in occasional con-

versation, or are appointed at any certain time or place; whether they are managed with or without any formal rules to govern them. But there are three sorts of *disputation*, in which there are some forms and orders observed, and which are distinguished by these three names, *viz. Socratic, Forensic, and Academic*, i. e. the disputes of the schools.

CONCERNING each of these it may not be improper to discourse a little, and give a few *particular directions or remarks* about them.

C H A P. XI.

The Socratical Way of Disputation.

I. **T**HIS method of dispute derives its name from *Socrates*, by whom it was practised, and by other philosophers in his age, long before *Aristotle* invented the particular forms of *syllogism* in *mood* and *figure*, which are now used in scholastic disputations.

II. THE *Socratical* way is managed by *questions* and *answers* in such a manner as this, *viz.* If I would lead a person into the belief of a heaven or hell, or a future
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state of rewards and punishments, I might begin in some such manner of enquiry, and suppose the most obvious and easy answers.

Ques. DOES not God govern the world?

Ans. SURELY he that made it governs it.

Ques. IS not God both a good and a righteous governor?

Ans. BOTH these characters doubtless belong to him.

Ques. WHAT is the true notion of a good and righteous governor?

Ans. THAT he punishes the wicked and rewards the good.

Ques. ARE the good always rewarded in this life?

Ans. No surely, for many virtuous men are miserable here, and greatly afflicted.

Ques. ARE the wicked always punished in this life?

Ans. No certainly, for many of them live without sorrow, and some of the vilest of men are often raised to great riches and honour.

Ques. WHEREIN then doth God make it appear that he is good and righteous?

Ans. I OWN there is but little appearance of it on earth.

Ques. WILL there not be a time then, when the tables shall be turned, and the scene of things changed, since God governs mankind righteously?

Ans.

Ans. DOUBTLESS there must be a proper time, wherein God will make that goodness and that righteousness to appear.

Ques. *IF this be not before their death, how can it be done?*

Ans. I CAN think of no other way, but by supposing man to have some existence after this life.

Ques. *ARE you not convinced then, that there must be a state of reward and punishment after death?*

Ans. YES surely, I now see plainly that the goodness and righteousness of God, as governor of the world, necessarily require it.

III. Now the *advantages of this method are very considerable.*

1. IT represents the *form of a dialogue or common conversation*, which is a much more easy, more pleasant, and a more sprightly way of instruction, and more fit to excite the attention and sharpen the penetration of the learner, than solitary reading or silent attention to a lecture. Man being a sociable creature, delights more in conversation, and learns better this way, if it could always be wisely and happily practised.

2. THIS method *bath some thing very obliging in it*, and carries a very humble and condescending air, when he that instructs
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seems to be the enquirer, and seeks information from him who learns.

3. *IT leads the learner into the knowledge of truth as it were by his own invention*, which is a very pleasing thing to human nature; and by questions pertinently and artificially proposed, it does as effectually draw him on to discover his own mistakes, which he is much more easily persuaded to relinquish when he seems to have discovered them himself.

4. *IT is managed in a great measure in the form of the most easy reasoning*, always arising from something asserted or known in the foregoing *answer*, and so proceeding to enquire something unknown in the following *question*, which again makes way for the next *answer*. Now such an exercise is very alluring and entertaining to the understanding, while its own reasoning powers are all along employed; and that without labour or difficulty, because the querist finds out and proposes all the intermediate ideas or middle terms.

IV. *THERE is a method very near a-kin to this which has much obtained of late, viz. writing controversies by questions only, or confirming or refuting any position, or persuading to or dehorting from any practice by the mere proposal of queries. The answer to them is supposed to be so plain and so necessary, that they are not expressed because*
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the query itself carries a convincing argument in it, and seems to determine what the *answer* must be.

V. IF Christian catechisms could be framed in the manner of a *Socratical* dispute by question and answer, it would wonderfully enlighten the minds of children, and it would improve their intellectual and reasoning powers, at the same time that it leads them into the knowledge of religion: and it is upon one account, well suited to the capacity of children; for the *questions* may be pretty numerous, and the querist must not proceed too swiftly towards the determination of his point proposed, that he may with more ease, with brighter evidence, and with surer success, draw the learner on to assent to those *principles* step by step, from whence the *final conclusion* will naturally arise. The only inconvenience would be this, that if children were to reason out all their way entirely into the knowledge of every part of their religion, it would draw common catechisms into too large a volume for their leisure, attention or memory.

YET those who explain their catechisms to them may, by due application and forethought, instruct them in this manner.

C H A P. XII.

Of Forensic D I S P U T E S.

I. **T**HE *Forum* was a public place in *Rome*, where lawyers and orators made their speeches before the proper judge in matter of property, or in criminal cases, to accuse or excuse, to complain or defend: thence all sorts of disputations in public assemblies or courts of justice, where several persons make their distinct speeches for or against any person or thing whatsoever, but more especially in civil matters, may come under the name of *forensic disputes*.

II. THIS is practised not only in the *courts of judicature*, where a single person sits to judge of the truth or goodness of any cause, and to determine according to the weight of reasons on either side; but it is used also in *political senates or parliaments, ecclesiastical synods, and assemblies* of various kinds.

In these assemblies, generally one person is chosen *chairman* or *moderator*, not to give a determination to the controversy, but chiefly to keep the several speakers to the rules of order and decency in their conduct; but the final determination of the questions arises from the *majority of opinions* or *votes* in the assembly, according as they

they are or ought to be swayed by the superior weight of reason appearing in the several speeches that are made.

III. THE method of proceeding is usually in some such form as this. The first person who speaks when the court is set, opens the case either more briefly or at large, and proposes the case to the judge or the chairman, or moderator of the assembly, and gives his own reasons for his opinion in the case proposed.

IV. THIS person is succeeded by one, or perhaps two or several more, who paraphrase on the same subject, and argue on the same side of the question; they confirm what the first has spoken, and urge new *reasons* to enforce the same: then those who are of a different opinion, stand up and make their several speeches in a succession, opposing the cause which others have maintained, giving their *reasons* against it, and endeavouring to refute the arguments whereby the first speakers have supported it.

V. AFTER this, one and another rises up to make their *replies*, to vindicate or to condemn, to establish or to confute what has been offered before on each side of the question; till at last, according to the rules, orders, customs of the court or assembly, the controversy is decided, either by a *single judge* or the *suffrage of the assembly*.

VI. WHERE the question or matter in debate consists of several parts, after it is once opened by the first or second speaker, sometimes those who follow take each of them a particular part of the debate, according to their inclination or their prior agreement, and apply themselves to argue upon that single point only, that so the whole *complexion* of the debate may not be thrown into confusion by the variety of subjects, if every speaker should handle all the subjects of debate.

VII. BEFORE the final sentence or determination is given, it is usual to have the reasons and arguments which have been offered on both sides, summed up and represented in a more compendious manner; and this is done either by the appointed *judge of the court*, or the *chairman*, or some *noted person* in the assembly, that so judgment may proceed upon the fullest survey of the whole subject, that as far as possible in human affairs nothing may be done contrary to truth or justice.

VIII. As this is a practice in which multitudes of gentlemen, besides those of the learned professions, may be engaged, at least in their maturer years of life, so it would be a very proper and useful thing to introduce this custom into our academies, *viz.* to propose cases, and let the students debate them in a *forensic* manner in the presence

fence of their tutors. There was something of this kind practised by the *Roman* youth in their schools, in order to train them up for orators, both in the *forum* and in the *senate*. Perhaps *Juvenal* gives some hints of it when he says,

————— ———— ———— & nos
Consilium dedimus Syllæ, privatus ut altum
Dormiret ———— ———— ———— Sat. 1.

Where with men-boys I strove to get re-
 nown,
 Advising *Sylla* to a private gown,
 That he might sleep the sounder.

SOMETIMES these were assigned to the boys as single subjects of a theme or declamation: so the same poet speaks sarcastically to *Hannibal*,

——— *I demens, & sævas curre per Alpes,*
Ut pueris placeas & declamatio fias.
 Sat. 10.

Go climb the rugged *Alps*, ambitious fool,
 To please the boys, and be a theme at school.

SEE more of this matter in *Kennet's Antiquities of Rome*, in the second *Essay* on the *Roman* education.

C H A P. XIII.

Of Academic or Scholastic DISPUTATION.

THE common methods in which *disputes* are managed in the *Schools of Learning*, are these, *viz.*

I. THE *tutor* appoints a *question* in some of the sciences to be debated amongst his students : one of them undertakes to *affirm* or to *deny* the question, and to defend his assertion or negation, and to answer all objections against it ; he is called the *respondent* : and the rest of the students in the same class, or who pursue the same science, are the *opponents*, who are appointed to dispute or *raise objections* against the proposition thus affirmed or denied.

II. EACH of the students successively in their turn becomes the *respondent* or the defender of that proposition, while the rest *oppose* it also successively in their turns.

III. IT is the business of the *respondent* to write a *thesis* in *Latin*, or short discourse on the question proposed ; and he either *affirms* or *denies* the question according to the opinion of the tutor, which is supposed

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to be the truth, and he reads it at the beginning of the dispute.

IV. IN his discourse (which is written with as great accuracy as the youth is capable of) he explains the terms of the question, frees them from all ambiguity, fixes their sense, declares the true intent and meaning of the question itself, separates it from other questions with which it may have been complicated, and distinguishes it from other questions which may happen to be a-kin to it, and then pronounces in the *negative* or *affirmative* concerning it.

V. WHEN this is done, then in the second part of his discourse he gives his own strongest arguments to confirm the proposition he has laid down, *i. e.* to vindicate his own side of the question: but he does not usually proceed to represent the *objections* against it, and to solve or answer them; for it is the business of the other students to raise objections in disputing.

VI. *Note*, IN some schools, the *respondent* is admitted to talk largely upon the question with many flourishes and illustrations, to introduce great authorities from ancient and modern writings for the support of it, and to scatter *Latin* reproaches in abundance on all those who are of a different sentiment. But this is not always permitted, nor should it indeed be ever indulged,
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lest it teach youth to reproach instead of reasoning.

VII. WHEN the *respondent* has read over his *thesis* in the school, the *junior student* makes an objection, and draws it up in the regular form of a syllogism: the *respondent* repeats the objection, and either denies the major or minor proposition directly, or he distinguishes upon some word or phrase in the major or minor, and shews in what sense the proposition may be true, but that *that* sense does not affect the question; and then declares that in the sense which affects the present question the proposition is not true, and consequently he denies it.

VIII. THEN the *opponent* proceeds by another syllogism to vindicate the proposition that is denied: again the *respondent* answers by denying or distinguishing.

THUS the disputation goes on in a *series or succession of syllogisms and answers*, till the *objector* is silenced, and has no more to say.

IX. WHEN he can go no further, the *next student* begins to propose his objection, and then the *third* and the *fourth*, even to the *senior*, who is the last opponent.

X. DURING this time, the *tutor* sits in the chair as *President* or *Moderator*, to see that the rules of disputation and decency be observed on both sides; and to admonish each disputant of any irregularity in their

conduct. His work is also to illustrate and explain the answer or distinction of the *respondent* where it is obscure, to strengthen it where it is weak, and to correct it where it is false : and when the *respondent* is pinched with a strong objection, and is at a loss for an answer, the *moderator* assists him, and suggests some answer to the objection of the *opponent*, in defence of the question, according to his own opinion or sentiment.

XI. IN public disputes, where the *opponents* and *respondents* chuse their own side of the question, the *moderator's* work is not to favour either disputant ; but he only sits as *president* to see that the laws of disputation be observed, and a *decorum* maintained.

XII. Now the *laws of disputation* relate either to the *opponent*, or to the *respondent*, or to *both*.

THE *laws obliging the opponent* are these,

1. THAT he must directly contradict the proposition of the *respondent*, and not merely attack any of the arguments whereby the *respondent* has supported that proposition : for it is one thing to *confute a single argument* of the respondent, and another to *confute the thesis* itself.

2. (WHICH is a-kin to the former) he must contradict or oppose the very sense
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and intention of the proposition as the respondent has stated it, and not merely oppose the words of the thesis in any other sense; for this would be the way to plunge the dispute into ambiguity and darkness, to talk beside the question, to wrangle about words, and to attack a proposition different from what the *respondent* has espoused, which is called *Ignoratio elenchi*.

3. HE must propose his argument in a plain, short, and syllogistic form, according to the rules of logic, without flying to *fallacies* or *sophisms*; and as far as may be, he should use *categorical* syllogisms.

4. THOUGH the *respondent* may be attacked either upon a point of his own concession, which is called *Argumentum ex concessis*, or by reducing him to an absurdity, which is called *Reductio ad absurdum*, yet it is the neatest, the most useful, and the best sort of disputation where the *opponent* draws his objections from the nature of the question itself.

5. WHERE the *respondent* denies any proposition, the *opponent*, if he proceed, must directly vindicate and confirm that proposition, *i. e.* he must make that proposition the conclusion of his next syllogism.

6. WHERE the *respondent* limits or distinguishes any proposition, the *opponent* must directly prove his own proposition in that sense, and according to that member

of the distinction in which the *respondent* denied it.

XIII. THE *laws that oblige the respondent* are these.

1. To repeat the argument of the *opponent* in the very same words in which it was proposed, before he attempts to answer it.

2. IF the syllogism be false in the *logical form* of it, he must discover the fault according to the *rules of logic*.

3. IF the argument does not directly and effectually oppose his *thesis*, he must shew this mistake, and make it appear that his *thesis* is safe, even though the argument of the *opponent* be admitted: or at least, that the argument does only aim at it collaterally, or at a distance, and not directly overthrow it, or conclude against it.

4. WHERE the *matter* of the *opponent's* objection is faulty in any part of it, the *respondent* must grant what is true in it, he must deny what is false, he must distinguish or limit the proposition which is ambiguous or doubtful; and then granting the sense in which it is true, he must deny the sense in which it is false.

5. IF an *hypothetic* proposition be false, the *respondent* must deny the *consequence*: if a *disjunctive*, he must deny the *disjunction*; if a *categorical* or *relative*, he must simply deny it,

6. IT is sometimes allowed for the *respondent* to use an *indirect answer* after he has answered *directly*: and he may also shew how the *opponent's* argument may be retorted against himself.

XIV. THE laws that oblige both *disputants* are these.

1. SOMETIMES it is necessary there should be a mention of certain *general principles* in which they both agree, relating to the question, that so they may not dispute on those things which either are or ought to have been first granted on both sides.

2. WHEN the state of the controversy is well known, and plainly determined and agreed, it must not be altered by *either disputant* in the course of the disputation; and the *respondent* especially should keep a watchful eye on the *opponent* in this matter.

3. LET neither *party* invade the province of the other; especially let the *respondent* take heed that he does not turn *opponent*; except in retorting the argument upon his adversary, after a direct response; and even this is allowed only as an illustration or confirmation of his own response.

4. LET each wait with patience till the other has done speaking. It is a piece of rudeness to interrupt another in his speech.

YET, though the *disputants* have not this liberty, the *moderator* may do it, when either of the *disputants* break the rules, and

he may interpose so far as to keep them in order.

XV. IT must be confest there are some *advantages* to be attained by *academical disputation*. It gives vigour and briskness to the mind thus exercised, and relieves the languor of private study and meditation. It sharpens the wit and all the inventive powers. It makes the thoughts active, and sends them on all sides to find arguments and answers both for opposition and defence. It gives opportunity of viewing the subject of discourse on all sides, and of learning what inconveniencies, difficulties and objections attend particular opinions. It furnishes the soul with various occasions of starting such thoughts as otherwise would never have come into the mind. It makes a student more expert in attacking and refuting an error, as well as in vindicating a truth. It instructs the scholar in the various methods of warding off the force of objections, and of discovering and refelling the subtle tricks of sophisters. It procures also a freedom and readiness of speech, and raises the modest and diffident genius to a due degree of courage.

XVI. BUT there are some very *grievous inconveniencies* that may sometimes overbalance all these *advantages*. For many young students by a constant habit of disputing, grow impudent and audacious, proud

proud and disdainful, talkative and impertinent, and render themselves intolerable by an obstinate humour of maintaining whatever they have asserted, as well as by a spirit of contradiction, opposing almost every thing that they hear. The disputation itself often awakens the passions of ambition, emulation, and anger; it carries away the mind from that calm and sedate temper which is so necessary to contemplate truth.

XVII. IT is evident also, that by frequent exercises of this sort, wherein *opinions true and false* are argued, supported and refuted on both sides; the mind of man is led by insensible degrees to an uncertain and fluctuating temper, and falls into danger of a *sceptical humour*, which never comes to an establishment in any doctrines. Many persons by this means become much more ready to oppose whatsoever is offered in searching out truth; they hardly wait till they have read or heard the sentiment of any person, before their heads are busily employed to seek out arguments against it. They grow naturally sharp in finding out difficulties: and by indulging this humour, they converse with the dark and doubtful parts of a subject so long, till they almost render themselves incapable of receiving the full evidence of a proposition, and acknowledging the light of truth. It has
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some tendency to make a youth a *carping critic*, rather than a *judicious* man.

XVIII. I WOULD add yet further, that in these disputations the *respondent* is generally appointed to maintain the supposed truth, that is, the *tutor's opinion*. But all the *opponents* are busy and warmly engaged in finding arguments against the truth. Now if a sprightly young genius happens to manage his argument so well as to puzzle and gravel the *respondent*, and perhaps to perplex the *moderator* a little too, he is soon tempted to suppose his argument unanswerable, and the truth entirely to lie on his side. The pleasure which he takes in having found a *sophism* which has great appearance of reason, and which he himself has managed with such success, becomes perhaps a strong prejudice to engage his inward sentiments in favour of his argument, and in opposition to the supposed truth.

XIX. YET perhaps it may be possible to reduce *scholastic disputations* under such a guard, as may in some measure prevent most of these abuses of them, and the unhappy events that too often attend them: for it is pity that an exercise which has some valuable benefits attending it, should be utterly thrown away, if it be possible to secure young minds against the abuse of it; for which purpose some of these *directions* may seem proper.

XX.

XX. *GENERAL directions for scholastic disputes.*

1. NEVER dispute upon mere trifles, things that are utterly useless to be known, under a vain pretence of sharpening the wit: for the same advantage may be derived from solid and useful subjects, and thus two happy ends may be attained at once. Or if such disputations are always thought dangerous in important matters, let them be utterly abandoned.

2. Do not make infinite and unsearchable things the matter of dispute, nor such propositions as are made up of mere words without ideas, lest it lead young persons into a most unhappy habit of *talking without a meaning*, and to boldly determine upon things that are hardly within the reach of human capacity.

3. LET not obvious and known truths, or some of the most plain and certain propositions be bandied about in a disputation, for a mere trial of skill: for he that opposes them in this manner, will be in danger of contracting a habit of opposing all evidence, will acquire a *spirit of contradiction*, and pride himself in a power of resisting the brightest light, and fighting against the strongest proofs: this will insensibly injure the mind, and tends greatly to an universal scepticism.

UPON

UPON the whole, therefore, the most proper subjects of dispute seem to be those questions, which are not of the very highest importance and certainty, nor of the meanest and trifling kind: but rather the intermediate questions between these two; and there is a large sufficiency of them in the sciences. But this I put as a mere proposal, to be determined by the more learned and prudent.

4. IT would be well if every dispute could be so ordered, as to be a means of searching out truth, and not to gain a triumph. Then each *disputant* might come to the work without bias and prejudice, with a desire of truth, and not with ambition of glory and victory.

NOR should the aim and design of the *respondent* be to avoid artfully and escape the difficulties which the *opponent* offers, but to discuss them thoroughly, and solve them fairly, if they are capable of being solved.

AGAIN, let the *opponent* be solicitous not to darken and confound the responses that are given him by fresh subtilties; but let him bethink himself whether they are not a just answer to the objection, and be honestly ready to perceive and accept them, and yield to them.

5. FOR this end, let both the *respondent* and *opponent* use the clearest and most distinct and expressive language in which they
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can clothe their thoughts. Let them seek and practise brevity and perspicuity on both sides, without long declamations, tedious circumlocutions, and rhetorical flourishes.

IF there happen to be any doubt or obscurity on either side, let neither the one nor the other ever refuse to give a fair explication of the words they use.

6. THEY should not indulge ridicule, either of persons and things in their disputations. They should abstain from all banter and jest, laughter and merriment. These are things that break in upon that philosophical gravity, sedateness and serenity of temper which ought to be observed in every search after truth. However, an argument on some subjects may be sometimes clothed with a little pleasantry, yet a jest or witticism should never be used instead of an argument, nor should it ever be suffered to pass for a real and solid proof.

BUT especially if the subject be sacred or divine, and having nothing in it comical or ridiculous, all ludicrous turns and jocular or comical airs should be entirely excluded, lest young minds become tinged with a silly and prophane sort of ridicule, and learn to jest and trifle with the awful solemnities of religion.

7. NOR should sarcasm and reproach, or insolent language ever be used among fair disputants. Turn not off from things

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to speak of persons. Leave all noisy contests, all immodest clamours, brawling language, and especially all personal scandal and scurrility to the meanest part of the vulgar world. Let your manner be all candor and gentleness, patient and ready to hear, humbly zealous to inform and be informed: you should be free and pleasant in every answer and behaviour, rather like *well-bred gentlemen* in polite conversation, than like *noisy and contentious wranglers*.

8. IF the *opponent* sees victory to incline to his side, let him be content to shew the force of his argument to the intelligent part of the company, without too importunate and petulant demands of an answer, and without insulting over his antagonist, or putting the modesty of the *respondent* to the blush. Nor let the *respondent* triumph over the *opponent*, when he is silent and replies no more. On which side soever victory declares herself, let neither of them manage with such unpleasing and insolent airs, as to awaken those evil passions of pride, anger, shame or resentment on either side, which alienate the mind from truth, render it obstinate in the defence of an error, and never suffer it to part with any of its old opinions.

IN short, when truth evidently appears on either side, let them learn to yield to conviction. When either party is at a *non-plus*,

plus, let them confess the difficulty, and desire present assistance or further time and retirement to consider of the matter, and not rack their present invention to find out little shifts to avoid the force and evidence of truth.

9. MIGHT it not be a safer practice, in order to attain the best ends of disputation, and to avoid some of the ill effects of it, if the *opponents* were sometimes engaged on the side of truth, and produced their arguments in opposition to error? And what if the *respondent* was appointed to support the error, and defend it as well as he could, till he was forced to yield at least to those arguments of the opponents, which appear to be really just and strong and unanswerable?

IN this practice, the *thesis* of the *respondent* should only be a fair stating of the question, with some of the chief objections against the truth proposed and solved.

PERHAPS this practice might not so easily be perverted and abused to raise a *ca-villing*, *disputative* and *sceptical* temper in the minds of youth.

I CONFESS in this method which I now propose, there would be one among the students, *viz.* the *respondent*, always engaged in the support of supposed error; but all the rest would be exercising their talents in arguing for the supposed truth: whereas in

the common methods of disputation in the schools, especially where the students are numerous, each single student is perpetually employed to oppose the truth and vindicate error, except once in a long time when it comes to his turn to be *respondent*.

10. UPON the whole, it seems necessary that these methods of disputation should be learnt in the schools, in order to teach students better to defend truth, and to refute error, both in writing and conversation, where the scholastic forms are utterly neglected.

BUT after all, the advantage which youth may gain by disputations depends much on the *tutor* or *moderator*: he should manage with such prudence both in the disputation and at the end of it, as to make all the *disputants* know the very point of controversy, wherein it consists; he should manifest the fallacy of sophistical objections, and confirm the solid arguments and answers. This might teach students how to make the *art of disputation* useful for the searching out the truth and the defence of it, that it may not be learnt and practised only as an *art of wrangling*, which reigned in the schools several hundred years, and divested the growing reason of youth of its best hopes and improvements.

C H A P.

C H A P. XIV.

Of STUDY, or MEDITATION.

I. **I**T has been proved and established in some of the foregoing chapters, that neither our own *observations*, nor our *reading the labours of the learned*, nor the *attendance on the best lectures of instruction*, nor enjoying the *brightest conversation*, can ever make a man truly *knowing and wise*, without the *labours of his own reason* in surveying, examining and judging concerning all subjects upon the best evidence he can acquire. A good genius, or *sagacity of thought*, a *happy judgment*, a *capacious memory*, and *large opportunities of observation and converse*, will do much of themselves towards the cultivation of the mind, where they are well improved: but where to the advantage of *learned lectures, living instructions*, and *well chosen books, diligence and study* are superadded, this man has all human aids concurring to raise him to a superior degree of wisdom and knowledge.

UNDER the preceding heads of discourse, it has been already declared how our own *meditation and reflection* should examine, cultivate and improve all other methods and advantages of enriching the understanding,

standing. What remains in this *chapter* is to give some *further occasional hints* how to employ our own thoughts, what sort of subjects we should meditate on, and in what manner we should regulate our studies, and how we may improve our judgment, so as in the most effectual and compendious way to attain such knowledge as may be most useful for every man in his circumstances of life, and particularly for those of the learned professions.

II. THE first direction for youth is this, *learn betimes to distinguish between words and things*: Get clear and plain ideas of the things you are set to study. Do not content yourselves with mere words and names, lest your laboured improvements only amass a heap of unintelligible phrases, and you feed upon husks instead of kernels. This rule is of unknown use in every science.

BUT the greatest and most common danger is in the sacred science of theology, where settled terms and phrases have been pronounced divine and orthodox, which yet have had no meaning in them. The *scholastic divinity* would furnish us with numerous instances of this folly: and yet for many ages all *truth* and all *heresy* have been determined by such senseless tests, and by words without ideas: such *Shibboleths* as these have decided the secular fates of men; and bishopricks or burning, mitres

tres or faggots have been the rewards of different persons, according as they pronounced these consecrated syllables, or not pronounced them. To defend them, was all piety and pomp and triumph; to despise them, or to doubt or deny them, was torture and death. A thousand thank-offerings are due to that providence which has delivered our age and our nation from these absurd iniquities! O that every specimen and shadow of this madness were banished from our schools and churches in every shape!

III. LET not young students *apply themselves to search out deep, dark and abstruse matters, far above their reach, or spend their labour in any peculiar subjects, for which they have not the advantages of necessary antecedent learning, or books, or observations.* Let them not be too hasty to know things above their present powers, nor plunge their enquiries at once into the depths of knowledge, nor begin to study any science in the middle of it; this will confound rather than enlighten the understanding: such practices may happen to discourage and jade the mind by an attempt above its power, it may balk the understanding, and create an aversion to future diligence, and perhaps by despair may forbid the pursuit of that subject for ever afterwards; as a limb overstrained by lifting

a weight above its power, may never recover its former agility and vigour ; or if it does, the man may be frightened from ever exerting his strength again.

IV. NOR yet let any student on the other hand *fright himself at every turn with unsurmountable difficulties*, nor imagine that the truth is wrapt up in impenetrable darkness. These are formidable *spectres* which the understanding raises sometimes to flatter its own laziness. Those things which in a remote and confused view seem very obscure and perplexed, may be approached by gentle and regular steps, and may then unfold and explain themselves at large to the eye. The hardest problems in *geometry*, and the most intricate schemes or diagrams may be explicated and understood step by step: every great mathematician bears a constant witness to this observation.

V. IN learning any new thing, there should *be as little as possible first proposed* to the mind at once, and that being understood and fully mastered, proceed then to the next adjoining part yet unknown. This is a slow, but safe and sure way to arrive at knowledge. If the mind apply itself at first to easier subjects and things near a-kin to what is already known, and then advance to the more remote and knotty parts of knowledge by slow degrees, it will be able in this manner to cope with great difficulties,

ties, and prevail over them with amazing and happy success.

MATHON happened to dip into the two last chapters of a new book of *geometry* and *mensurations*; as soon as he saw it, and was frightened with the complicated diagrams which he found there, about the *Frustums of Cones* and *Pyramids*, &c. and some deep demonstrations among *conic sections*; he shut the book again in despair, and imagined none but a *Sir Isaac Newton* was ever fit to read it. But his tutor happily persuaded him to begin the first pages about lines and angles; and he found such surprising pleasure in three weeks time in the victories he daily obtained, that at last he became one of the chief geometers of his age.

VI. *ENGAGE not the mind in the intense pursuit of too many things at once*; especially such as have no relation to one another. This will be ready to distract the understanding, and hinder it from attaining perfection in any one subject of study. Such a practice, gives a slight smattering of several sciences without any solid and substantial knowledge of them, and without any real and valuable improvement; and though two or three sorts of study may be usefully carried on at once, to entertain the mind with variety, that it may not be overtired with one sort of thoughts, yet a mul-

itude of subjects will too much distract the attention, and weaken the application of the mind to any one of them.

WHERE two or three sciences are pursued at the same time, if one of them be dry, abstracted, and unpleasant, as *logic*, *metaphysics*, *law*, *languages*, let another be more entertaining and agreeable, to secure the mind from weariness and aversion to study. Delight should be intermingled with labour as far as possible, to allure us to bear the fatigue of dry studies the better. *Poetry*, *practical mathematics*, *history*, &c. are generally esteemed entertaining studies, and may be happily used for this purpose. Thus while we relieve a dull and heavy hour by some alluring employments of the mind, our very diversions enrich our understandings, and our pleasure is turned into profit.

VII. IN the pursuit of every valuable subject of knowledge *keep the end always in your eye*, and *be not diverted from it by every petty trifle you meet with in the way*. Some persons have such a wandering genius, that they are ready to pursue every incidental theme or occasional idea, till they have lost sight of their original subject. These are the men who when they are engaged in conversation, prolong their story by dwelling on every incident, and swell their narrative with long parentheses, till they

they have lost their first design; like a man who is sent in quest of some great treasure, but he steps aside to gather every flower he finds, or stands still to dig up every shining pebble he meets with in his way, till the treasure is forgotten and never found.

VIII. *EXERT your care, skill and diligence about every subject, and every question, in a just proportion to the importance of it, together with the danger and bad consequences of ignorance or error therein.* Many excellent advantages flow from this one direction.

I. THIS rule will teach you to be very careful in gaining *some general and fundamental truths both in philosophy, in religion, and in human life*; because they are of the highest moment, and conduct our thoughts with ease into a thousand inferior and particular propositions. Such is that great principle in natural philosophy, the *doctrine of gravitation, or mutual tendency of all bodies toward each other*, which Sir Isaac Newton has so well established, and from which he has drawn the solution of a multitude of appearances in the heavenly bodies as well as on earth.

SUCH is that golden principle of *morality* which our blessed Lord has given us, *Do that to others, which you think just and reasonable that others should do to you*, which is almost sufficient in itself to solve all cases

of conscience which relate to our neighbour.

SUCH are those principles in religion, that *a rational creature is accountable to his Maker for all his actions; that the soul of man is immortal; that there is a future state of happiness and of misery depending on our behaviour in the present life, on which all our religious practices are built or supported.*

WE should be very curious in *examining all propositions that pretend to this honour of being general principles*: and we should not without just evidence admit into this rank mere matters of common fame, or commonly received opinions; no, nor the general determinations of the learned, or the established articles of any church or nation, &c. for there are many learned presumptions, many synodical and national mistakes, many established falsehoods, as well as many vulgar errors, wherein multitudes of men have followed one another for whole ages almost blindfold. It is of great importance for every man to be careful that these general principles are just and true; for one error may lead us into thousands, which will naturally follow, if once a *leading falsehood* be admitted.

2. THIS rule will direct us to be *more careful about practical points than mere speculations*, since they are commonly of much greater use and consequence: therefore
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the speculations of *Algebra*, the doctrine of *infinites*, and the *quadrature of curves in mathematical learning*, together with all the train of theorems in *natural philosophy*, should by no means intrench upon our studies of *morality* and *virtue*. Even in the science of *divinity* itself, the sublimest speculations of it are not of that worth and value, as the rules of duty towards God and towards men.

3. *IN matters of practice we should be most careful to fix our end right*, and wisely determine the *scope at which we aim*; because that is to direct us in the choice and use of all the *means to attain it*. If our end be wrong, all our labour in the means will be vain, or perhaps so much the more pernicious as they are better suited to attain that mistaken end. If mere sensible pleasure or human grandeur or wealth be our chief end, we shall chuse means contrary to piety and virtue, and proceed apace toward real misery.

4. *THIS rule will engage our best powers and deepest attention in the affairs of religion*, and things that *relate to a future world*; for those propositions which extend only to the interest of the present life, are but of small importance, when compared with those that have influence upon our everlasting concerns.

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5. AND even in the affairs of religion, if we walk by the conduct of this rule, we shall be much more laborious in our enquiries into the *necessary and fundamental articles of faith and practice* than the *lesser appendices of christianity*. The great doctrines of *repentance toward God, faith in our Lord Jesus Christ, with love to men, and universal holiness*, will employ our best and brightest hours and meditations; while the *mint, annise, and cummin, the gestures and vestures and fringes of religion*, will be regarded no further then they have a plain and evident connection with *faith and love, with holiness and peace*.

6. THIS rule will make us solicitous not only to *avoid such errors, whose influence will spread wide into the whole scheme of our own knowledge and practice*, but such mistakes also whose influence would be yet more *extensive and injurious to others, as well as to ourselves*; perhaps to many persons or many families, to a whole church, a town, a country, or a kingdom. Upon this account, persons who are called to instruct others, who are raised to any eminence either in church or state, ought to be careful in settling their principles in matters relating to the *civil, the moral or the religious* life; lest a mistake of theirs should diffuse wide mischief, should draw along
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with it must pernicious consequences, and perhaps extend to following generations.

THESE are some of the advantages which arise from the eighth rule, *viz.* pursue every enquiry and study in proportion to its real value and importance.

IX. HAVE a care lest *some beloved notion, or some darling science so far prevail over your mind, as to give a sovereign tincture to all your other studies;* and discolour all your ideas; like a person in the jaundice, who spreads a yellow scene with his eyes over all the objects which he meets. I have known a man of peculiar skill in *music*, and much devoted to that science, who found out a great resemblance of the *Athanasian doctrine of the trinity* in every single note, and he thought it carried something of argument in it to prove that doctrine. I have read of another who accommodated the seven days of the first week of creation to seven notes of music, and thus the whole creation became harmonious.

UNDER this influence, derived from *mathematical* studies, some have been tempted to cast all their *logical*, their *metaphysical*, and their *theological* and *moral* learning into the method of *mathematicians*, and bring every thing relating to those *abstracted*, or those *practical* sciences under *theorems*, *problems*, *postulates*, *scholiums*, *corollaries*, &c. whereas the matter ought always to direct
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the method; for all subjects or matters of thought, cannot be moulded or subdued to one form. Neither the rules for the conduct of the understanding, nor the doctrines nor duties of religion and virtue can be exhibited naturally in figures and diagrams. Things are to be considered as they are in themselves; their nature is inflexible, and their natural relations unalterable; and therefore in order to conceive them aright, we must bring our understandings to things, and not pretend to bend and strain things to comport with our fancies and forms.

X. *SUFFER not any beloved study to prejudice your mind so far in favour of it as to despise all other learning.* This is a fault of some little souls who have got a smattering of *astronomy, chemistry, metaphysics, history, &c.* and for want of a due acquaintance with other sciences, make a scoff at them all in comparison of their favourite science. Their understandings are hereby cooped up in narrow bounds, so that they never look abroad into other provinces of the intellectual world, which are more beautiful perhaps, and more fruitful than their own: if they would search a little into other sciences, they might not only find treasures of new knowledge, but might be furnished also with rich hints of thought, and glorious assistances to cultivate that very province

vince to which they have confined themselves.

HERE I would always give some grains of allowance to the sacred science of *theology*, which is incomparably superior to all the rest, as it teaches us the knowledge of God, and the way to his eternal favour. This is that noble study which is every man's duty, and every one who can be called a rational creature is capable of it. This is that science which would truly enlarge the minds of men, were it studied with that freedom, that unbiaſſed love of truth, and that sacred charity which it teaches? and if it were not made, contrary to its own nature, the occasion of strife, faction, malignity, a narrow spirit, and unreasonable impositions on the mind and practice. Let this therefore stand always chief.

XI. *LET every particular study have due and proper time assigned it, and let not a favourite science prevail with you to lay out such hours upon it, as ought to be employed upon the more necessary and more important affairs or studies of your profession.* When you have, according to the best of your discretion, and according to the circumstances of your life, fixed proper hours for particular studies, endeavour to keep to those rules; not indeed with a superstitious preciseness, but with some good degrees of a regular constancy. Order and method in a
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course of study saves much time, and makes large improvements: such a fixation of certain hours, will have a happy influence to secure you from trifling and wasting away your minutes in impertinence.

XII. *DO not apply yourself to any one study at one time, longer than the mind is capable of giving a close attention to it without weariness or wandering.* Do not over-fatigue the spirits at any time, lest the mind be seized with a lassitude, and thereby be tempted to nauseate and grow tired of a particular subject before you have finished it.

XIII. In the beginning of your application to any new subject, *be not too uneasy under present difficulties that occur, nor too importunate and impatient for answers and solutions to any questions that arise.* Perhaps a little more study, a little further acquaintance with the subject, a little time and experience will solve those difficulties, untie the knot, and make your doubts vanish: especially if you are under the instruction of a tutor, he can inform you that your enquiries are perhaps too early, and that you have not yet learnt those principles upon which the solution of such a difficulty depends.

XIV. *DO not expect to arrive at certainty in every subject which you pursue.* There are a hundred things wherein we mortals

in this dark and imperfect state must be content with probability, where our best light and reasonings will reach no further. We must balance arguments as justly as we can, and where we cannot find weight enough on either side to determine the scale with sovereign force and assurance, we must content ourselves perhaps with a small preponderation. This will give us a probable opinion, and those probabilities are sufficient for the daily determination of a thousand actions in human life, and many times even in matters of religion.

It is admirably well expressed by a late writer, ‘when there is great strength of argument set before us, if we will refuse to do what appears most fit for us, until every little objection is removed, we shall never take one wise resolution as long as we live.’

SUPPOSE I had been honestly and long searching what religion I should chuse, and yet I could not find that the arguments in defence of *Christianity* arose to complete certainty, but went only so far as to give me a probable evidence of the truth of it; though many difficulties still remained, yet I should think myself obliged to receive and practise that religion; for the God of nature and reason has bound us to assent and act according to the best evidence we have, even though it be not absolute and complete; and as he is our supreme judge, his
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abounding goodness and equity will approve and acquit the man whose conscience honestly and willingly seeks the best light, and obeys it as far as he can discover it.

BUT in matters of great importance in religion, let him join all due diligence with earnest and humble prayer for divine aid in his enquiries; such prayer and such diligence as eternal concerns require, and such as he may plead with courage before the Judge of all.

XV. *ENDEAVOUR to apply every speculative study, as far as possible, to some practical use, that both yourself and others may be the better for it.* Enquiries even in natural philosophy should not be mere amusements, and much less in the affairs of religion. Researches into the springs of natural bodies and their motions should lead men to invent happy methods for the ease and convenience of human life; or at least they should be improved to awaken us to admire the wondrous wisdom and contrivance of God our Creator in all the works of nature.

IF we pursue mathematical speculations, they will inure us to attend closely to any subject, to seek and gain clear ideas, to distinguish truth from falsehood, to judge justly, and to argue strongly; and these studies do more directly furnish us with
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all the various rules of those useful arts of life, viz. *measuring, building, sailing, &c.*

EVEN our very enquiries and disputations about *vacuum* or *space* and *atoms*, about *incommensurable quantities*, and the *infinite divisibility of matter* and *eternal duration*, which seems to be purely speculative, will shew us some good practical lessons, will lead us to see the weakness of our nature, and should teach us humility in arguing upon divine subjects and matters of sacred revelation. This should guard us against rejecting any doctrine which is expressly and evidently revealed, though we cannot fully understand it. It is good sometimes to lose and bewilder ourselves in such studies for this very reason, and to attain this practical advantage, this improvement in true modesty of spirit.

XVI. THOUGH we should always be ready to *change our sentiments of things upon just conviction of their falshood*, yet there is not the same necessity of *changing our accustomed methods of reading, or study and practice*, even though we have not been led at first into the happiest *method*. Our thoughts may be true, though we may have hit upon an improper order of thinking. Truth does not always depend upon the most convenient method. There may be a certain form and order in which we have long accustomed ourselves to range our ideas

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and notions, which may be best for us now, though it was not originally best in itself. The *inconveniencies* of changing may be much greater than the *conveniencies* we could obtain by a new method.

As for instance; if a man in his younger days has ranged all his sentiments in *theology* in the method of *Ames's Medulla Theologiæ*, or Bishop *Usher's Body of Divinity*, it may be much more natural and easy for him to continue to dispose all his further acquirements in the same order, though perhaps neither of these treatises are in themselves written in the most perfect method. So when we have long fixed our *cases of shelves* in a library, and ranged our books in any particular order, *viz.* according to their languages, or according to their *subjects*, or according to the *alphabetical names of the authors*, &c. we are perfectly well acquainted with the order in which they now stand, and we can find any particular book which we seek, or add a new book which we have purchased with much greater ease than we do in finer cases of shelves where the books were ranged in any different manner whatsoever; any different position of the volumes would be new and strange and troublesome to us, and would not countervail the *inconveniencies* of a change.

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So if a man of forty years old has been taught to hold his pen awkwardly in his youth, and yet writes sufficiently well for all the purposes of his station, it is not worth while to teach him now the most accurate methods of handling that instrument; for this would create him more trouble without equal advantage, and perhaps he might never attain to write better after he has placed all his fingers perfectly right with this new accuracy.

C H A P. XV.

Of fixing the Attention.

A STUDENT should labour by all proper methods to acquire a *steady fixation of thought*. *Attention* is a very necessary thing in order to improve our minds. The evidence of truth does not always appear immediately, nor strike the soul at first sight. It is by *long attention* and *inspection* that we arrive at evidence, and it is for want of it we judge falsely of many things. We make haste to determine upon a slight and a sudden view; we confirm our guesses which arise from a glance; we pass a judg-

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ment while we have but a confused or obscure perception, and thus plunge ourselves into mistakes. This is like a man, who walking in a mist, or being at a great distance from any visible object, (suppose a *tree*, a *man*, a *horse*, or a *church*) judges much amiss of the figure and situation and colours of it, and sometimes takes one for the other; whereas if he would but withhold his judgment till he come nearer to it, or stay till clearer light comes, and then would fix his eyes longer upon it, he would secure himself from those mistakes.

Now in order to gain a greater *facility of attention* we may observe these *rules*.

I. *GET a good liking to the study or knowledge you would pursue.* We may observe that there is not much difficulty in confining the mind to contemplate what we have a great desire to know: and especially if they are matters of sense, or ideas which paint themselves upon the fancy. It is but *acquiring an hearty good-will and resolution to search out and survey the various properties and parts of such objects*, and our attention will be engaged if there be any delight or diversion in the study or contemplation of them. Therefore *mathematical studies* have a strange influence towards fixing the attention of the mind, and giving a steadiness to a wandering disposition, because they deal much in lines, figures and numbers,
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which affect and please the sense and imagination. *Histories* have a strong tendency the same way, for they engage the soul by a variety of sensible occurrences ; when it hath begun, it knows not how to leave off ; it longs to know the final event through a natural curiosity that belongs to mankind. *Voyages and travels*, and accounts of strange countries and strange appearances will assist in this work. This sort of study detains the mind by the perpetual occurrence and expectation of something new, and that which may gratefully strike the imagination.

II. *SOMETIMES* we may make use of sensible things and corporeal images for the illustration of those notions which are more abstracted and intellectual. Therefore *diagrams* greatly assist the mind in *astronomy* and *philosophy* ; and the *emblems* of virtues and vices, may happily teach children, and pleasingly impress those useful moral ideas on young minds, which perhaps might be conveyed to them with much more difficulty by mere *moral* and *abstracted discourses*.

I CONFESS in this practice of representing moral subjects by pictures, we should be cautious lest we so far immerse the mind in corporeal images, as to render it unfit to take in an abstracted and intellectual idea, or cause it to form wrong conceptions of immaterial things. This prac-

tice therefore is rather to be used at first in order to get a fixed habit of attention, and in some cases only; but it can never be our constant way and method of pursuing all moral, abstracted and spiritual themes.

III. *APPLY* yourself to those studies, and read those authors who draw out their subjects into a perpetual chain of connected reasonings, wherein the following parts of the discourse are naturally and easily derived from those which go before. Several of the *mathematical sciences*, if not all, are happily useful for this purpose. This will render the labour of study delightful to a rational mind, and will fix the powers of the understanding with strong *attention* to their proper operations by the very pleasure of it. *Labor ipse voluptas*, is a happy proposition wheresoever it can be applied.

IV. *DO* not chuse your constant place of study by the finery of the prospects, or the most various and entertaining scenes of sensible things. Too much light, or a variety of objects which strike the eye or the ear, especially while they are ever in motion or often changing, have a natural and powerful tendency to steal away the mind too often from its steady pursuit of any subject which we contemplate; and thereby the soul gets a habit of silly curiosity and impertinence, of trifling and wandering. *Vagario* thought himself

himself furnished with the best closet for his study among the beauties, gaieties and diversions of *Kensington* or *Hampton-Court*; but after seven years professing to pursue learning, he was a mere novice still.

V. *BE not in too much haste to come to the determination of a difficult or important point.* Think it worth your waiting to find out truth. Do not give your assent up to either side of a question too soon, merely on this account, that the study of it is long and difficult. Rather be contented with ignorance for a season, and continue in suspense till your *attention* and meditation and due labour have found out sufficient evidence on one side. Some are so fond to know a great deal at once, and love to talk of things with freedom and boldness before they thoroughly understand them, that they scarcely ever allow themselves *attention* enough to search the matter through and through.

VI. *HAVE a care of indulging the more sensual passions and appetites of animal nature: they are great enemies to attention.* Let not the mind of a student be under the influence of any warm affection to things of sense, when he comes to engage in the search of truth, or the improvement of his understanding. A person under the power of love, or fear, or anger, great pain or deep sorrow, hath so

little government of his soul, that he cannot keep it attentive to the proper subject of his *meditation*. The passions call away the thoughts with incessant importunity towards the object that excited them; and if we indulge the frequent rise and roving of passions, we shall thereby procure an unsteady and unattentive habit of mind.

YET this one exception must be admitted, *viz.* If we can be so happy as to engage any passion of the soul on the side of the particular study which we are pursuing, it may have a great influence to fix the attention more strongly to it.

VII. IT is therefore very useful to fix and engage the mind in the pursuit of any study, by a *consideration of the divine pleasures of truth and knowledge*, by a *sense of our duty to God*, by a *delight in the exercise of our intellectual faculties*, by the *hope of future service* to our fellow-creatures, and *glorious advantage to ourselves*, both in this world and that which is to come. These thoughts, though they may move our affections, yet they do it with a proper influence: these will rather assist and promote our *attention*, than disturb or divert it from the subject of our present and proper meditations. A soul inspired with the fondest love of truth, and the warmest aspirations after sincere felicity and celestial beatitude,

tude, will keep all its powers attentive to the incessant pursuit of them: passion is then refined, and consecrated to its divinest purposes.

C H A P. XVI.

Of enlarging the Capacity of the MIND.

THERE are three things which in an especial manner go to make up that *amplitude or capacity of mind*, which is one of the noblest characters belonging to the understanding. (1.) *When the mind is ready to take in great and sublime ideas without pain or difficulty.* (2.) *When the mind is free to receive new and strange ideas, upon just evidence, without great surprise or aversion.* (3.) *When the mind is able to conceive or survey many ideas at once without confusion, and to form a true judgment derived from that extensive survey.* The person who wants either of these characters may in that respect be said to have a *narrow genius*. Let us diffuse our meditations a little upon this subject.

I. THAT is an ample and capacious mind which is *ready to take in vast and sublime ideas without pain or difficulty.* Persons

sons who have never been used to converse with any thing but the common, little, and obvious affairs of life, have acquired a narrow or contracted habit of soul, that they are not able to stretch their intellect wide enough to admit large and noble thoughts; they are ready to make their domestic, daily and familiar images of things, the measure of *all that is*, and *all that can be*.

TALK to them of the vast dimensions of the *planetary worlds*; tell them that our star called *Jupiter* is a solid globe, two hundred and twenty times bigger than the earth; that the *sun* is a vast globe of fire above a thousand times bigger than *Jupiter*; that is, two hundred and twenty thousand times bigger than the earth; that the *distance from the earth to the sun* is eighty-one millions of miles; and that a cannon bullet shot from the earth would not arrive at the *nearest of the fixed stars* in some hundreds of years; they cannot bear the belief of it, but hear all these glorious labours of *astronomy* as a mere idle romance.

INFORM them of the *amazing swiftness* of the motion of some of the smallest or the biggest bodies in nature; assure them, according to the best philosophy, that the planet *Venus* (*i. e.* our *morning* or *evening star*, which is near as big as our earth,) though it seems to move from its place but a few yards in a month, does really fly seventy

venty thousand miles in an hour; tell them that the *rays of light* shoot from the sun to our earth at the rate of one hundred and eight thousand miles in the second of a minute, they stand aghast at such sort of talk, and believe it no more than the tales of *giants fifty yards high*, and the *rabbinical fables of leviathan*, who every day swallows a fish of three miles long, and is thus preparing himself to be the food and entertainment of the blessed at the feast of Paradise.

THESE unenlarged souls are in the same manner disgusted with the wonders which the *microscope* has discovered concerning the *shape*, the *limbs*, and *motions of ten thousand little animals*, whose united bulk would not equal a pepper-corn: They are ready to give the lye to all the improvements of our senses by the invention of a variety of glasses, and will scarcely believe any thing beyond the testimony of their naked eye without the assistance of art.

Now if we would attempt in a learned manner to relieve the minds that labour under this defect,

(I.) IT is useful to begin with some *first principles of Geometry*, and lead them onward by degrees to the doctrine of quantities which are *incommensurable*, or which will admit of no common measure, though it be never so small. By this means they will

will see the necessity of admitting the *infinite divisibility of quantity or matter*.

THIS same doctrine may also be proved to their understandings, and almost to their senses, by some easier arguments in a more obvious manner. As the very opening and closing of a pair of *compasses* will evidently prove, that if the smallest supposed part of matter or quantity be put between the points, there will be still less and less distances or quantities all the way between the legs, till you come to the head or joint: wherefore there is no such thing possible as the smallest quantity. But a little acquaintance with true philosophy and mathematical learning would soon teach them, that there are no limits either as to the *extension of space*, or to the *division of body*, and would lead them to believe they are bodies amazingly great or small beyond their present imagination.

(2.) IT is proper also to acquaint them with the *circumference of our earth*, which may be proved by very easy principles of *geometry, geography, and astronomy*, to be about twenty-four thousand miles round, as it has been actually found to have this dimension by mariners who have sailed round it. Then let them be taught that in every twenty-four hours, either the *sun and stars* must all move round this earth, or the *earth* must turn round upon its own axis.

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If the *earth* itself revolve thus, then each house or mountain near the equator must move at the rate of a thousand miles in an hour: but if (as they generally suppose) the *sun* or *stars* move round the earth, then (the circumference of their several orbits or spheres being vastly greater than this earth) they must have a motion prodigiously swifter than a thousand miles an hour. Such a thought as this will by degrees enlarge their minds, and they will be taught, even upon their own principle of *the diurnal revolutions of the heavens*, to take in some of the vast dimensions of the heavenly bodies, their spaces and motions.

(3.) To this should be added the *use of telescopes* to help them to see the distant wonders in the skies; and *microscopes* which discover the minutest part of little animals, and reveal some of the finer and most curious works of nature. They should be acquainted also with some other noble *inventions of modern philosophy*, which have a great influence to enlarge the human understanding, of which I shall take occasion to speak more under the next head.

(4.) FOR the same purpose they may be invited to read those parts of *Milton's* admirable poem, entitled *Paradise Lost*, where he describes the armies and powers of angels, the wars and the senate of devils, the creation of this earth, together with
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the descriptions of heaven, hell, and paradise.

It must be granted that poesy often deals in these vast and sublime ideas. And even if the subject or matter of the poem doth not require such amazing and extensive thoughts, yet tropes and figures which are some of the main powers and beauties of poesy, do so gloriously exalt the matter as to give a sublime imagination its proper relish and delight.

So when a boar is chaffed in hunting,

*His nostrils, flames expire,
And his red eye-balls roll with living fire.*

DRYDEN.

When *Ulysses* with-holds and suppresses his resentment,

*His wrath comprest
Recoiling, mutter'd thunder in his breast.*

POPE.

BUT especially where the subject is grand, the poet fails not to represent it in all its grandeur.

So when the supremacy of a God is described,

*He sees with equal eye, as God of all,
A hero perish, or a sparrow fall:
Atoms or systems, into ruin hurl'd,
And now a bubble burst, and now a world.*

POPE.

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THIS sort of writings have a natural tendency to enlarge the capacity of the mind, and make sublime ideas familiar to it. And instead of running always to the ancient *Heathen poesy*, with this design, we may with equal if not superior advantage, apply ourselves to converse with some of the best of our modern poets, as well as with the writings of the prophets, and the *poetical* parts of the Bible, *viz.* the book of *Job* and the *Psalms*, in which sacred authors we shall find sometimes more sublime ideas, more glorious descriptions, more elevated language, than the fondest critics have ever found in any of the *Heathen* versifiers either of *Greece* or *Rome*; for the *eastern* writers use and allow much stronger figures and tropes than the *western*.

Now there are many, and great, and sacred *advantages* to be derived from this sort of *enlargement of the mind*.

It will lead us into more exalted apprehensions of *the great God our Creator* than ever we had before. It will entertain our thoughts with holy wonder and amazement, while we contemplate that being who created these various works of surprising greatness, and surprising smallness; who has displayed most unconceivable *wisdom* in the contrivance of all the parts, powers and motions of these little animals invisible to the naked eye; who has manifested a
most

most divine extent of *knowledge, power and greatness*, in forming, moving and managing the most extensive bulk of the heavenly bodies, and in surveying and comprehending all those unmeasurable spaces in which they move. *Fancy* with all her images is fatigued and overwhelmed in following the *planetary worlds* through such immense stages, such astonishing journies as these are, and resigns its place to the *pure intellect*, which learns by degrees to take in such ideas as these, and to adore its Creator with new and sublime devotion.

AND not only are we taught to form juster ideas of the *great God* by these methods, but this enlargement of the mind carries us on to nobler conceptions of his *intelligent creatures*. The mind that deals only in vulgar and common ideas, is ready to imagine the *nature and powers of man* to come something too near to *God his Maker*, because we do not see or sensibly converse with any beings superior to ourselves. But when the soul has obtained a greater *amplitude of thought*, it will not then immediately pronounce every thing to be God which is above man. It then learns to suppose, there may be as many various ranks of beings in the invisible world in a constant gradation superior to us, as we ourselves are superior to all the ranks of being beneath us in this visible world; even though
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we descend downward far below the *ant* and the *worm*, the *snail* and the *oyster*, to the least and to the dullest animated atoms which are discovered to us by *microscopes*.

By this means we shall be able to suppose what prodigious power *angels*, whether good or bad, must be furnished with, and prodigious knowledge in order to over-see the realms of *Persia* and *Græcia* of old, or if any such superintend the affairs of *Great-Britain*, *France*, *Ireland*, *Germany*, &c. in our days : what power and speed is necessary to destroy one hundred eighty-five thousand armed men in one night in the *Assyrian* camp of *Sennacherib*, and all the first-born in the land of *Egypt* in another, both which are attributed to an angel.

By these steps we shall ascend to form more just ideas of the knowledge and grandeur, the power and glory of the *Man Jesus Christ*, who is intimately united to God, and is one with him. Doubtless he is furnished with superior powers to all the angels in Heaven, because he is employed in superior work, and appointed to be the sovereign Lord of all the visible and invisible worlds. It is his human nature, in which *the Godhead dwells bodily*, that is advanced to these honours and to this empire; and perhaps there is little or nothing in the government of the kingdoms of nature, and grace, but what is transacted by the *Man*

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Jesus,

Jesus, inhabited by the *divine power and wisdom*, and employed as a medium or conscious instrument of this extensive government.

II. I PROCEED now to consider the next thing wherein the *capacity* or *amplitude of the mind* consists, and that is, when the mind is *free to receive new and strange ideas and propositions upon just evidence without any great surprise or aversion*. Those who confine themselves within the circle of their own hereditary ideas and opinions, and who never give themselves leave so much as to examine or believe any thing beside the dictates of their own family or sect, or party, are justly charged with a *narrowness of soul*. Let us survey some instances of this imperfection, and then direct to the cure of it.

(I.) PERSONS who have been bred up all their days within the smoke of their father's chimney, or within the limits of their native town or village, are surprised at every new sight that appears, when they travel a few miles from home. The *plowman* stands amazed at the shops, the trade, the crowds of people, the magnificent buildings, the pomp and riches and equipage of the court and city, and would hardly believe what was told him before he saw it. On the other hand, the *cockney* travelling into the country is surprised at many actions
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of the quadruped and winged animals in the field, and at many common practices of rural affairs.

IF either of these happen to hear an account of the familiar and daily customs of foreign countries, they pronounce them at once indecent and ridiculous: so *narrow* are their understandings, and their thoughts so confined, that they know not how to believe any thing *wise* or *proper*, besides what they have been taught to practise.

THIS *narrowness of mind* should be cured by *bearing and reading the accounts of different parts of the world, and the histories of past ages, and of nations and countries distant from our own*, especially the more polite parts of mankind. Nothing tends in this respect so much to enlarge the mind, as travelling, *i. e.* making a visit to other towns, cities or countries, besides those in which we were born and educated: and where our condition of life does not grant us this privilege, we must endeavour to supply the want of it by books.

(2.) IT is the same *narrowness of mind* that awakens the surprise and aversion of some persons, when they hear of *doctrines and schemes in human affairs or in religion* quite different from what they have embraced. Perhaps they have been trained up from their infancy in one set of notions, and their thoughts have been confined to

one single tract both in the civil or religious life, without ever hearing or knowing what other opinions are current among mankind : or at least they have seen all other notions besides their own, represented in a false and malignant light, whereupon they judge and condemn at once every sentiment but what their own party receives, and they think it a piece of justice and truth to lay heavy censures upon the practice of every different sect in *christianity* or *politics*. They have so rooted themselves in the opinions of their party, that they cannot hear an *objection* with patience, nor can they bear a vindication, or so much as an *apology*, for any set of principles beside their own : all the rest is *nonsense* or *heresy*, *folly* or *blasphemy*.

THIS defect also is to be relieved by *free conversation with persons of different sentiments* ; this will teach us to bear with patience a defence of opinions contrary to our own. If we are scholars, we should also read the objections against our own tenets, and view the principles of other parties, as they are represented in their own authors, and not merely in the citations of those who would confute them. We should take an honest and unbiaſſed survey of the force of reasoning on all sides, and bring all to the test of unprejudiced reason and divine revelation. *Note*, This is not to be

be done in a rash and self-sufficient manner; but with a humble dependance on divine wisdom and grace while we walk among snares and dangers.

By such a free converse with persons of different sects (especially those who differ only in particular forms of christianity, but agree in the *great and necessary doctrines* of it) we shall find that there are persons of good sense and virtue, persons of piety and worth, persons of much candour and goodness, who belong to different parties, and have imbibed sentiments opposite to each other. This will soften the roughness of an unpolished soul, and enlarge the avenues of our charity towards others, and incline us to receive them into all the degrees of unity and affection which the word of God requires.

(3.) I MIGHT borrow further illustrations both of this *freedom* and this *aversion to receive new truths*, from modern *astronomy* and *natural philosophy*. How much is the vulgar part of the world surprised at the talk of the *diurnal and annual revolutions of the earth*? They have ever been taught by their senses and their neighbours, to imagine the *earth* stands fixed in the centre of the universe, and that the *sun* with all the *planets* and the *fixed stars* are whirled round this little globe once in twenty-four hours; not considering that

such a diurnal motion, by reason of the distance of some of those heavenly bodies, must be almost infinitely swifter and more inconceivable than any which the modern astronomers attribute to them. Tell these persons that the *sun* is fixed in the centre, that the *earth*, with all the *planets*, roll round the sun in their several periods, and that the *moon* rolls round the earth in a lesser circle, while together with the earth she is carried round the sun ; they cannot admit a syllable of this new and strange doctrine, and they pronounce it utterly contrary to all sense and reason.

ACQUAINT them that there are *four moons* also perpetually rolling round the planet *Jupiter*, and carried along with him in his periodical circuit round the sun, which little moons were never known till the year 1610, when *Galileo* discovered them by his telescope ; inform them that *Saturn* has five moons of the same kind attending him ; and that the *body of that planet* is encompassed with a broad flat circular ring, distant from the planet twenty-one thousand miles, and twenty-one thousand miles broad, they look upon these things as tales and fancies, and will tell you that the glasses do but delude your eyes with vain images ; and even when they themselves consult their own eyesight in the use of these tubes, the narrowness

rowness of their mind is such, that they will scarcely believe their senses when they dictate ideas so new and strange.

AND if you proceed further, and attempt to lead them into a belief that all these *planetary worlds are habitable*, and it is probable they are replenished with intellectual beings dwelling in bodies, they will deride the folly of him that informs them; for they resolve to believe there are no habitable worlds but this *earth*, and no spirits dwelling in bodies besides *mankind*; and it is well if they do not fix the brand of *heresy* on the man who is leading them out of their long imprisonment, and loosing the fetters of their souls.

THERE are many other things relating to *mechanical experiments*, and to the properties of the air, water, fire, iron, the loadstone, and other minerals and metals, as well as the doctrine of the sensible qualities, *viz.* colours, sounds, tastes, &c. which this rank of men cannot believe for want of a greater *amplitude of mind*.

THE best way to convince them, is by giving them some acquaintance with the *various experiments* in philosophy, and proving by *ocular demonstration* the multiform and amazing operations of the *air-pump*, the *loadstone*, the *chemical furnace*, *optical glasses*, and *mechanical engines*. By this means the understanding will stretch itself

by degrees, and when they have found there are so many new and strange things that are most evidently true, they will not be so forward to condemn every new proposition in any of the other sciences, or in the affairs of religion or civil life.

III. *THE capacity of the understanding* includes yet another qualification in it, and that is an *ability to receive many ideas at once without confusion*. The ample mind takes a survey of several objects with one glance, keeps them all within sight and present to the soul, that they may be compared together in their mutual respects; it forms just judgments, and it draws proper inferences from this comparison even to a great length of argument, and a chain of demonstrations.

THE narrowness that belongs to human souls in general, is a great imperfection and impediment to wisdom and happiness. There are but few persons who can contemplate, or practise several things at once; our faculties are very limited, and while we are intent upon one part or property of a subject, we have but a slight glimpse of the rest, or we lose it out of sight. But it is a sign of a *large and capacious mind*, if we can with one single view take in a variety of objects; or at least when the mind can apply itself to several objects with so swift a succession, and in so few moments, as

attains almost the same ends as if it were all done in the same instant.

THIS is a necessary qualification in order to great *knowledge* and *good judgment*: for there are several things in human life, in religion, and in the sciences, which have various circumstances, appendices and relations attending them; and without a survey of all those ideas which stand in connection with, and relation to each other, we are often in danger of passing a false judgment on the subject proposed. It is for this reason there are so numerous controversies found among the learned and unlearned world, in matters of *religion* as well as in the affairs of *civil government*. The notions of *sin*, and *duty to God and our fellow-creatures*; of *law, justice, authority, and power*; of *covenant, faith, justification, redemption, and grace*; of *church, bishop, presbyter, ordination, &c.* contain in them such complicated ideas, that when we are to judge of any thing concerning them, it is hard to take into our view at once all the attendants or consequents that must and will be concerned in the determination of a single question: and yet without a due attention to many, or most of these, we are in danger of determining that question amiss.

IT is owing to the narrowness of our minds, that we are exposed to the same
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peril in the *matters of human duty and prudence*. In many things which we do, we ought not only to consider the *mere naked action* itself, but the persons *who act*, the persons *toward whom*, the time *when*, the place *where*, the manner *how*, the end *for which* the action is done, together with the effects that *must* or that *may follow*, and all other surrounding circumstances : these things must necessarily be taken into our view, in order to determine whether the action, which is indifferent in itself, be either lawful or unlawful, good or evil, wise or foolish, decent or indecent, proper or improper, as it is so circumstantiated.

LET me give a plain instance for the illustration of this matter. *Mario* kills a dog, which, considered merely in itself, seems to be an indifferent action : now the dog was *Timon's*, and not his own ; this makes it look unlawful. But *Timon* bid him do it ; this gives it an appearance of lawfulness again. It was done at church, and in time of divine service ; these circumstances added, cast on it an air of irreligion. But the dog flew at *Mario*, and put him in danger of his life ; this relieves the seeming impiety of the action. Yet *Mario* might have escaped by flying thence ; therefore the action appears to be improper. But the dog was known to be mad ; this further circumstance makes it almost necessary that the
dog

dog should be slain, lest he might worry the assembly, and do much mischief. Yet again, *Mario* killed him with a pistol, which he happened to have in his pocket since yesterday's journey, now hereby the whole congregation was terrified and discomposed, and divine service was broken off; this carries an appearance of great indecency and impropriety in it: but after all, when we consider a further circumstance, that *Mario* being thus violently assaulted by a mad dog had no way of escape, and had no other weapon about him, it seems to take away all the colours of impropriety, indecency or unlawfulness, and to allow that the preservation of one or many lives will justify the act as wise and good. Now all these concurrent appendices of the action ought to be surveyed, in order to pronounce with justice and truth concerning it.

THERE are a multitude of human actions in private life, in domestic affairs, in traffic, in civil government, in courts of justice, in schools of learning, &c. which have so many complicated circumstances, aspects and situations, with regard to time and place, persons and things, that it is impossible for any one to pass a right judgment concerning them, without entering into most of these circumstances, and surveying them extensively, and comparing and balancing them all aright.

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WHENCE by the way, I may take occasion to say, how many thousands are there who take upon them to pass their censures on the personal and the domestic actions of others, who pronounce boldly on the affairs of the public, and determine the justice or madness, the wisdom or folly of national administrations, of peace and war, &c. whom neither God nor men ever qualified for such a post of judgment? they were not capable of entering into the numerous concurring springs of action, nor had they ever taken a survey of the twentieth part of the circumstances which were necessary for such judgments or censures.

IT is the *narrowness of our minds*, as well as the vices of the will, that oftentimes prevents us from taking a full view of all the complicated and concurring appendices that belong to human actions: thence it comes to pass that there is so little right judgment, so little justice, prudence, or decency, practised among the bulk of mankind; thence arise infinite reproaches and censures, alike foolish and unrighteous. You see therefore how needful and happy a thing it is, to be possess'd of some measure of this *amplitude of soul*, in order to make us very wise, or knowing, or just, or prudent, or happy.

I CONFESS this sort of *amplitude or capacity of Mind* is in a great measure the
gift

gift of nature, for some are born with much more capacious souls than others.

THE genius of *some persons* is so poor and limited, that they can hardly take in the connection of two or three propositions unless it be in matters of sense, and which they have learnt by experience; they are utterly *unfit for speculative studies*: it is hard for them to discern the difference betwixt *right* and *wrong* in matters of reason on any abstracted subjects; these ought never to set up for *scholars*, but apply themselves to those arts and professions of life which are to be learnt at an easier rate, by slow degrees and daily experience.

OTHERS have a soul a little more capacious, and they can take in the connection of a few propositions pretty well; but if the chain of consequences be a little prolix, here they stick and are confounded. If persons of this *make* ever devote themselves to *science*, they should be well assured of a solid and strong constitution of body, and well resolved to bear the fatigue of hard labour and diligence in study: *if the iron be blunt*, king *Solomon* tells us *we must put more strength*.

BUT, in the *third place*, there are *some* of so bright and happy a genius, and so ample a mind, that they can take in a long train of propositions, if not at once, yet in a very few moments, and judge well concerning

cerning the dependance of them. They can survey a variety of complicated ideas without fatigue or disturbance; and a number of truths offering themselves as it were in one view to their understanding, doth not perplex or confound them. This makes a great man.

Now though there may be much owing to nature in this case, yet experience assures us that even a lower degree of this capacity and extent of thought may be increased by diligence and application, by frequent exercise, and the observation of such *rules* as these.

I. *LABOUR* by all means to gain an *attentive and patient temper of mind*, a power of confirming and fixing your thoughts so long on any one appointed subject, till you have surveyed it on every side and in every situation, and run through the several powers, parts, properties, and relations, effects and consequences of it. He whose thoughts are very fluttering and wandering, and cannot be fixed attentively to a few ideas successively, will never be able to survey many and various objects distinctly at once, but will certainly be overwhelmed and confounded with the multiplicity of them. The rules for *fixing the attention* in the former chapter are proper to be consulted here.

II. *ACCUSTOM* yourself to clear and distinct ideas in every thing you think of. Be
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not satisfied with obscure and confused conceptions of things, especially where clearer may be obtained: for one obscure or confused idea, especially if it be of great importance in the question, intermingled with many clear ones, and placed in its variety of aspects towards them, will be in danger of spreading confusion over the whole scene of ideas, and thus may have an unhappy influence to overwhelm the understanding with darkness, and pervert the judgment. A little black paint will shamefully tincture and spoil twenty gay colours.

CONSIDER yet further, that if you content yourself frequently with *words instead of ideas*, or with *cloudy and confused notions* of things, how impenetrable will that darkness be, and how vast and endless that confusion which must surround and involve the understanding, when many of these obscure and confused ideas come to be set before the soul at once? and how impossible will it be to form a clear and just judgment about them.

III. USE all diligence to *acquire and treasure up a large store of ideas* and notions: take every opportunity to add something to your stock; and by frequent recollection fix them in your memory: nothing tends to confirm and enlarge the memory like a frequent review of its possessions, then the brain being well furnished
with

with various traces, signatures and images, will have a rich treasure always ready to be proposed or offered to the soul, when it directs its thought towards any particular subject. This will gradually give the mind a faculty of surveying many objects at once; as a *room* that is richly adorned and hung round with a *great variety of pictures*, strikes the eye almost at once with all that variety, especially if they have been well surveyed one by one at first: this makes it habitual and more easy to the inhabitants to take in many of those painted scenes with a single glance or two.

HERE *note*, that by acquiring a rich *treasure of notions*, I do not mean only *single ideas*, but also *propositions, observations* and *experiences*, with *reasonings* and *arguments* upon the various subjects that occur among natural or moral, common or sacred *affairs*; that when you are called to judge concerning any question, you will have some principles of truth, some useful axioms and observations always ready at hand to direct and assist your judgment.

IV. IT is necessary that we should as far as possible *entertain and lay up our daily new ideas, in a regular order*, and range the acquisitions of our souls under proper heads, whether of *divinity, law, physics, mathematics, morality, politics, trade, domestic life, civility, decency, &c.* whether
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of *cause, effect, substance, mode, power, property, body, spirit, &c.* we should inure our minds to method and order continually; and when we take in any fresh ideas, occurrences and observations, we should dispose of them in their proper places, and see how they stand and agree with the rest of our notions on the same subject: as a *scholar* would dispose of a *new book* on a proper shelf among its kindred authors; or as an *officer* at the post-house in *London* disposes of every *letter* he takes in, placing it in the box that belongs to the proper road or county.

IN any of these cases if things lay *all in a heap*, the addition of any new object would increase the confusion; but *method* gives a speedy and short survey of them with ease and pleasure. *Method* is of admirable advantage to keep our ideas from a confused mixture, and to preserve them ready for every use. The science of *ontology*, which distributes all *beings*, and all the *affections of being*, whether *absolute* or *relative*, under *proper classes*, is of good service to keep our intellectual acquisitions in such order, as that the mind may survey them at once.

V. As *method* is necessary for the improvement of the mind, in order to make your treasure of ideas most useful; so in all your *further pursuits of truth, and ac-*
R *quirement*

quirement of rational knowledge, observe a regular progressive method. Begin with the most simple, easy and obvious ideas; then by degrees join two, and three, and more of them together: thus the complicated ideas growing up under your eye and observation, will not give the same confusion of thought as they would do if they were all offered to the mind at once, without your observing the original and formation of them. An eminent example of this appears in the study of *arithmetic*. If a scholar just admitted into the school observes his master performing an operation in the *rule of division*, his head is at once disturbed and confounded with the manifold comparisons of the numbers of the *divisor* and *dividend*, and the multiplication of the one and subtraction of it from the other: but if he begin regularly at *addition*, and so proceed by *subtraction* and *multiplication*, he will then in a few weeks be able to take in an intelligent survey of all those operations in *division*, and to practise them himself with ease and pleasure, each of which at first seemed all intricacy and confusion.

An illustration of the like nature may be borrowed from *geometry* and *algebra*, and other mathematical practices: how easily does an *expert geometrician* with one glance of his eye, take in a complicated diagram made up of many *lines and circles*,

cles, angles, and arches? how readily does he judge of it, whether the demonstration designed by it be true or false? It was by degrees he arrived at this stretch of understanding; he began with a *single line* or a *point*; he joined *two lines* in an *angle*; he advanced to *triangle* and *square, polygons, and circles*; thus the powers of his understanding were stretched and augmented daily, till by diligence and regular application he acquired this extensive faculty of mind.

BUT this advantage does not belong only to *mathematical learning*. If we apply ourselves at first in any science to clear and single ideas, and never hurry ourselves on to the following and more complicated parts of knowledge till we thoroughly understand the foregoing, we may practise the same method of *enlarging the capacity of the soul* with success in any one of the sciences, or in the affairs of life and religion.

BEGINNING with *A, B, C*, and making *syllables* out of *letters*, and *words* out of *syllables*, has been the foundation of all that glorious superstructure of *arts and sciences*, which have enriched the minds and libraries of the learned world in several ages. These are the first steps by which the ample and capacious souls among mankind have arrived at that prodigious extent of knowledge, which renders them the wonder and glory of the nation where they live.

Though *Plato* and *Cicero*, *Descartes* and *Mr. Boyle*, *Mr. Locke* and *Sir Isaac Newton*, were doubtless favoured by nature with a genius of uncommon amplitude; yet in their early years and first attempts of science, this was but limited and narrow in comparison of what they attained at last. But how vast and capacious were those powers which they afterwards acquired by patient *attention* and watchful *observation*, by the pursuit of *clear ideas* and a *regular method* of thinking.

VI. ANOTHER means of acquiring this amplitude and capacity of mind, is a *perusal of difficult entangled questions, and of the solution of them in any science*. *Speculative* and *casuistical divinity* will furnish us with many such cases and controversies. There are some such difficulties in reconciling several parts of the epistles of *St. Paul* relating to the *Jewish* law and the *Christian* gospel; a happy solution whereof will require such an extensive view of things, and the reading of these happy solutions will enlarge this faculty in younger students. In *morals* and *political* subjects, *Puffendorf's Law of Nature and Nations*, and several determinations therein, will promote the same amplitude of mind. An attendance on public trials and arguments in the *civil* courts of justice, will be of good advantage for this purpose; and after a man

has studied the general principles of the law of nature and the laws of *England* in proper books, the reading the *reports of adjudged cases*, collected by men of great sagacity and judgment, will richly improve his mind toward acquiring this desirable amplitude and extent of thought, and more especially in persons of that profession.

C H A P. XVII.

Of improving the MEMORY.

MEMORY is a distinct faculty of the mind of man, very different from perception, judgment and reasoning, and its other powers. Then we are said to *remember* any thing, *when the idea of it arises in the mind with a consciousness at the same time that we have had this idea before.* Our memory is our natural power of retaining what we learn, and of recalling it on every occasion. Therefore we can never be said to *remember* any thing, whether it be ideas or propositions, words or things, notions or arguments, of which we have not

had some former idea or perception, either by *sense or imagination, thought or reflection*; but whatsoever we learn from observation, books or conversation, &c. it must all be laid up and preserved in the memory, if we would make it really useful.

So necessary and so excellent a faculty is the *memory* of man, that all other abilities of the mind borrow from hence their beauty and perfection; for other capacities of the soul are almost useless without this. To what purpose are all our labours in knowledge and wisdom, if we want memory to preserve and use what we have acquired? What signify all other intellectual or spiritual improvements, if they are lost as soon as they are obtained? It is memory alone that enriches the mind, by preserving what our labour and industry daily collect. In a word, there can be neither knowledge, nor arts, nor sciences without memory; nor can there be any improvement of mankind in virtue or morals, or the practice of religion without the assistance and influence of this power. Without memory the soul of man would be but a poor destitute naked being, with an everlasting blank spread over it, except the fleeting ideas of the present moment.

MEMORY is very useful to those *who speak*, as well as to those *who learn*. It
assists

assists the *teacher* and the *orator*, as well as the scholar or the hearer. The best speeches and instructions are almost lost, if those who hear them immediately forget them. And those who are called to speak in public are much better heard and accepted, when they can deliver their discourse by the help of a lively genius and a ready memory, than when they are forced to read all that they would communicate to their hearers. Reading is certainly a heavier way of the conveyance of our sentiments; and there are very few mere readers, who have the felicity of penetrating the soul and awakening the passions of those who hear, by such a grace and power of oratory, as the man who seems to talk every word from his very heart, and pours out the riches of his own knowledge upon the people round about him by the help of a free and copious memory. This gives life and spirit to every thing that is spoken, and has a natural tendency to make a deeper impression on the minds of men: it awakens the dullest spirits, causes them to receive a discourse with more affection and pleasure, and adds a singular grace and excellency both to the person and his oration.

A *good judgment* and a *good memory* are very different qualifications. A person may have a very strong, capacious, and retentive

memory, where the judgment is very poor and weak; as sometimes it happens in those who are but one degree above an idiot, who have manifested an amazing strength and extent of memory, but have hardly been able to join or disjoin two *or three* ideas in a wise and happy manner, to make a solid rational proposition.

THERE have been instances of others who have had but a very tolerable power of *memory*, yet their *judgment* has been of a much superior degree, just and wise, solid and excellent.

YET it must be acknowledged, that where a happy memory is found in any person, there is one good foundation laid for a wise and just judgment of things, where-soever the natural genius has any thing of sagacity and brightness to make a right use of it. A *good judgment* must always in some measure depend upon a survey and comparison of several things together in the mind, and determining the truth of some doubtful proposition by that survey and comparison. When the mind has, as it were, set all those various objects present before it, which are necessary to form a true proposition or judgment concerning any thing, it then determines that such and such ideas are to be joined or disjoined, to be affirmed or denied; and this in a consistency and correspondence with all those other ideas or propositions

positions which any way relate or belong to the same subject. Now there can be no such comprehensive survey of many things without a tolerable degree of memory; it is by reviewing things past we learn to judge of the future: and it happens sometimes, that if one needful or important object or idea be absent, the judgment concerning the thing enquired will thereby become false or mistaken.

You will *enquire* then, How comes it to pass, that there are some persons who appear in the world of business as well as in the world of learning, to have a good judgment, and have acquired the just character of prudence and wisdom, and yet have neither a very bright genius nor sagacity of thought, nor a very happy memory, so that they cannot set before their minds at once a large scene of ideas, in order to pass a judgment,

Now we may learn from *Pensoso* some account of this difficulty. You shall scarcely ever find this man forward in judging and determining things proposed to him: but he always takes time, and delays, and suspends, and ponders things maturely, before he passes his judgment: then he practises a slow meditation, ruminates on the subject, and thus perhaps in two or three nights and days rouses and awakens those several ideas, one after another as he
can,

can, which are necessary in order to judge right of the thing proposed, and makes them pass before his review in succession: this he doth to relieve the want both of a quick sagacity of thought, and of a ready memory and speedy recollection; and this caution and practice, lays the foundation of his just judgment and wise conduct. He surveys well before he judges.

WHENCE I cannot but take occasion to infer one good rule of advice, to persons of higher as well as lower genius, and of large as well as narrow memories, *viz.* That they do not too hastily pronounce concerning matters of doubt or enquiry, where there is not an urgent necessity of present action. The bright genius is ready to be so forward as often betrays itself into great errors in judgment, speech and conduct, without a continual guard upon itself, and using the bridle of the tongue. And it is by this delay and precaution, that many a person of much lower natural abilities, shall often excel persons of the brightest genius in wisdom and prudence.

It is often found, that a fine genius has but feeble memory: for where the genius is bright, and the imagination vivid, the power of memory may be too much neglected and lose its improvement. An active fancy readily wanders over a multitude of objects, and is continually enter-

taining itself with new flying images; it runs through a number of new scenes or new pages with pleasure, but without due attention, and seldom suffers itself to dwell long enough upon any one of them to make a deep impression thereof upon the mind, and commit it to lasting remembrance. This is one plain and obvious reason, why there are some persons of very bright parts and active spirits, who have but short and narrow powers of remembrance; for having riches of their own, they are not solicitous to borrow.

And as such a quick and various fancy and invention may be some hindrance to the attention and memory, so a mind of a good retentive ability, and which is ever crowding its memory with things which it learns and reads continually, may prevent, restrain and cramp the invention itself. The memory of *Leætorides*, is ever ready upon all occasions to offer to his mind something out of other men's writings or conversations, and is presenting him with the thoughts of other persons perpetually: thus the man who had naturally a good flowing invention, does not suffer himself to pursue his own thoughts. Some persons who have been blest by nature with sagacity and no contemptible genius, have too often forbid the exercise of it, by tying themselves down to the memory of the volumes they have read, and the sentiments of other men contained in them.

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WHERE the memory has been almost constantly employing itself in scraping together new acquirements, and where there has not been a judgment sufficient to distinguish what things were fit to be recommended and treasured up in the memory, and what things were idle, useless, or needless, the mind has been filled with a wretched heap and hotchpotch of words or ideas, and the soul may be said to have had *large* possessions, but *no true riches*.

I HAVE read in some of Mr. *Milton's* writings a very beautiful simile, whereby he represents the books of the *fathers*, as they are called in the *Christian* church. Whatsoever, saith he, old Time with his huge drag-net has conveyed down to us along the stream of ages, whether it be shells or shell-fish, jewels or pebbles, sticks or straws, sea-weeds or mud, these are the *antients*, these are the *fathers*. The case is much the same with the memorial possessions of the greatest part of mankind. A few useful things perhaps, mixed and confounded with many trifles and all manner of rubbish, fill up their memories and compose their intellectual possessions. It is a great happiness therefore to distinguish things aright, and to lay up nothing in the memory but what has some just value in it, and is worthy to be numbered as a part of our treasure.

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WHATSOEVER improvements are to the mind of man from the wise exercise of his own reasoning powers, these may be called his proper *manufactures*; and whatsoever he borrows from abroad, these may be termed his *foreign treasures*: both together make a wealthy and happy mind.

How many excellent judgments and reasonings are framed in the mind of a man of wisdom and study in a length of years? How many worthy and admirable notions has he been possessed of in life, both by his own reasonings and by his prudent and laborious collections in the course of his reading? But alas! how many thousands of them vanish away again and are lost in empty air, for want of a stronger and more retentive memory? When a young practitioner in the law was once said to contest a point of debate with that great lawyer in the last age, serjeant *Maynard*, he is reported to have answered him, *Alas, young man, I have forgot much more law than ever thou hast learnt or read.*

WHAT an unknown and unspeakable happiness would it be to a man of judgment, and who is engaged in the pursuit of knowledge, if he had but a power of stamping all his own best sentiments upon his memory in some indelible characters; and if he could but imprint every valuable paragraph and sentiment of the most excellent

cellent authors he has read, upon his mind, with the same speed and facility with which he read them? If a man of good genius and sagacity could but retain and survey all those numerous, those wise and beautiful ideas at once, which have ever passed through his thoughts upon any one subject, how admirably would he be furnished to pass a just judgment about all present objects and occurrences? What a glorious entertainment and pleasure would fill and felicitate his spirit, if he could grasp all these in a single survey; as the skilful eye of a painter runs over a fine and complicate piece of history wrought by the hand of a *Titian* or a *Raphael*, views the whole scene at once, and feeds himself with the extensive delight? But these are joys that do not belong to mortality.

THUS far I have indulged some loose and unconnected thoughts and remarks with regard to the different powers of *wit*, *memory* and *judgment*. For it was very difficult to throw them into a regular form or method without more room. Let us now with more regularity treat of the *memory* alone.

THOUGH the *memory* be a natural faculty of the mind of man, and belongs to spirits which are not incarnate, yet it is greatly assisted or hindered, and much diversified by the brain or the animal nature,

to

to which the soul is united in this present state. But what part of the brain that is, wherein the images of things lie treasured up, is very hard for us to determine with certainty. It is most probable that those very fibres, pores or traces of the brain, which assist at the first idea or perception of any object, are the same which assist also at the recollection of it: and then it will follow that the memory has no special part of the brain devoted to its own service, but uses all those parts in general, which subserve our sensations as well as our thinking and reasoning powers.

As the memory grows and improves in young persons from their childhood, and decays in old age, so it may be increased by art and labour, and proper exercise; or it may be injured and quite spoiled by sloth, or by a disease, or a stroke on the head. There are some reasonings on this subject, which make it evident, that the *goodness of a memory* depends in a great degree upon the consistence and the temperature of that part of the brain, which is appointed to assist the exercise of all our sensible and intellectual faculties.

So for instance, *in children*; they perceive and forget a hundred things in an hour; the brain is so soft, that it receives immediately all impressions like water or liquid mud, and retains scarcely any of them:
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all the traces, forms or images which are drawn there, are immediately effaced or closed up again, as though you wrote with your finger on the surface of a river or on a vessel of oil.

ON the contrary, *in old age*, men have a very feeble remembrance of things that were done of late, *i. e.* the same day or week or year; the brain is grown so hard, that the present images or strokes make little or no impression, and therefore they immediately vanish: *Prisco* in his seventy-eighth year, will tell long stories of things done when he was in the battle at the *Boyne* almost fifty years ago, and when he studied at *Oxford* seven years before; for those impressions were made when the brain was more susceptible of them; they have been deeply engraven at the proper season, and therefore they remain. But words or things which he lately spoke or did, they are immediately forgotten, because the brain is now grown more dry and solid in its consistence, and receives not much more impression than if you wrote with your finger on a floor of clay, or a plaistered wall.

BUT in the middle stage of life, or it may be from fifteen to fifty years of age, the memory is generally in its happiest state, the brain easily receives and long retains the images and traces which are impressed upon
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on it, and the natural spirits are more active to range these little infinite unknown figures of things in their proper cells or cavities, to preserve and recollect them.

WHATSOEVER therefore keeps the brain in its best temper and consistence, may be a help to preserve the memory: but excess of wine or luxury of any kind, as well as excess in the studies of learning or the businesses of life, may overwhelm the memory, by overstraining and weakening the fibres of the brain, overwasting the spirits, injuring the true consistence of that tender substance, and confounding the images that are laid up there.

A good memory has these several qualifications, (1.) It is *ready to receive and admit with great ease*, the various ideas both of words and things which are learned or taught. (2.) It is *large and copious to treasure up* these ideas in great number and variety. (3.) It is *strong and durable to retain* for a considerable time those words or thoughts which are committed to it. (4.) It is *faithful and active to suggest and recollect* upon every proper occasion, all those words or thoughts which have been recommended to its care, or treasured up in it.

Now in every one of these qualifications a memory may be injured, or may be improved: yet I shall not insist distinctly on these particulars, but only in general propose a few *rules or directions*, whereby this

noble faculty of *memory* in all its branches and qualifications may be preserved or assisted, and shew what are the practices that both by reason and experience have been found of happy influence to this purpose.

THERE is one great and *general direction* which belongs to the improvement of other powers as well as of the *memory*, and that is, *to keep it always in due and proper exercise*. Many acts by degrees form a habit, and thereby the ability or power is strengthened and made more ready to appear again in action. Our memories should be used and inured from childhood to bear a moderate quantity of knowledge let into them early, and they will thereby become strong for use and service. As any limb well and duly exercised grows stronger, the nerves of the body are corroborated thereby. *Milo* took up a calf, and daily carried it on his shoulders: as the calf grew, his strength grew also, and he at last arrived at firmness of joints enough to bear the bull.

OUR memories will be in a great measure moulded and formed, improved or injured, according to the exercise of them. If we never use them they will be almost lost. Those who are wont to converse or read about a few things only, will retain but a few in their memory: those who are used to remember things but for an hour, and charge their memories with it no longer, will retain them but an hour before they vanish,
and

and let words be remembered as well as things, that so you may acquire a *copia verborum* as well as *rerum*, and be more ready to express your mind on all occasions.

YET there should be a caution given in some cases: the memory of a child, or any infirm person, should not be overburdened; for a limb or a joint may be overstrained by being too much loaded, and its natural power never to be recovered. Teachers should wisely judge of the power and constitution of youth, and impose no more on them than they are able to bear with cheerfulness and improvement.

AND particularly they should take care, that the memory of the learner be not too much crowded with a tumultuous heap or over-bearing multitude of documents or ideas at one time; this is the way to remember nothing; one idea effaces another. An over-greedy grasp does not retain the largest handful. But it is the *exercise of memory* with a due moderation, that is one *general rule* towards the improvement of it.

THE *particular rules* are such as these:

1. *DUE attention and diligence to learn and know things* which we would commit to our remembrance, is a rule of great necessity in this case. When the attention is strongly fixed to any particular subject, all that is said concerning it, makes a deeper impression upon the mind. There

are some persons who complain they cannot remember divine or human discourses which they hear, when in truth their thoughts are wandering half the time, or they hear with such coldness and indifferency and a trifling temper of spirit, that it is no wonder the things which are read or spoken make but a slight impression on the brain, and get no firm footing in the seat of memory, but soon vanish and are lost.

It is needful therefore, if we would maintain a long remembrance of the things which we read or hear, that we should engage our delight and pleasure in those subjects, and use the other methods which are before prescribed in order to *fix the attention*. Sloth, indolence, and idleness, will no more bless the mind with intellectual riches, than it will fill the hand with grain, the field with corn, or the purse with treasure.

LET it be added also, that not only the slothful and the negligent deprive themselves of proper knowledge for the furniture of their memory, but such as appear to have active spirits, who are ever skimming over the surface of things with a volatile temper, will fix nothing in their mind. *Vario* will spend whole mornings in running over loose and unconnected pages, and with fresh curiosity is ever glancing over new words and ideas that strike his present fancy:

fancy: he is fluttering over a thousand objects of art and science, and yet treasures up but little knowledge. There must be the labour and the diligence of close attention to particular subjects of thought and enquiry, which only can impress what we read or think of upon the remembering faculty in man.

2. *CLEAR and distinct apprehension of the things which we commit to memory*, is necessary, in order to make them stick and dwell there. If we would remember words, or learn the names of persons or things, we should have them recommended to our memory by clear and distinct pronunciation, spelling or writing. If we would treasure up the ideas of things, notions, propositions, arguments and sciences, these should be recommended also to our memory by a clear and distinct perception of them. Faint glimmering and confused ideas will vanish like images seen in twilight. Every thing which we learn, should be conveyed to the understanding in the plainest expressions without any ambiguity, that we may not mistake what we desire to remember. This is a general rule whether we would employ the memory about words or things; though it must be confessed, that mere sounds and words are much harder to get by heart than the knowledge of things and real images.

FOR this reason take heed (as I have often before warned) that you do not take up with *words* instead of *things*, nor mere *sounds* instead of real *sentiments* and *ideas*. Many a lad forgets what has been taught him, merely because he never well understood it: he never clearly and distinctly took in the meaning of those sounds and syllables which he was required to get by heart.

THIS is one true reason why boys makes so poor a proficiency in learning the *Latin* tongue, under masters who teach them by grammars and rules written in *Latin*, of which I have spoken before. And this is a common case with children when they learn their catechisms in their early days. The language and the sentiments conveyed in those catechisms are far above the understanding of creatures of that age, and they have no tolerable ideas under the words. This makes the answers much harder to be remembered, and in truth they learn nothing but words without ideas; and if they are ever so perfect in repeating the words, yet they know nothing of divinity.

AND for this reason it is a necessary rule in teaching children the principles of religion, that they should be expressed in very plain, easy, and familiar words, brought as low as possible down to their understandings, according to their different ages and capacities,

capacities, and thereby they will obtain some useful knowledge when the words are treasured up in their memory, because at the same time they will treasure up those divine ideas too.

3. *METHOD and regularity in the things we commit to memory*, is necessary, in order to make them take more effectual possession of the mind, and abide there long. As much as *systematical* learning is decried by some vain and humourous triflers of the age, it is certainly the happiest way to furnish the mind with a variety of knowledge.

WHATSOEVER you would trust to your memory let it be disposed in a proper method, connected well together, and referred to distinct and particular heads or classes both general and particular. An apothecary's boy will much sooner learn all the medicines in his master's shop, when they are ranged in boxes or on shelves according to their distinct natures, whether herbs, drugs or minerals, whether leaves or roots, whether *chymical* or *galenical* preparations, whether simple or compound, &c. and when they are placed in some order according to their nature, their fluidity, or their consistence, &c. in phials, bottles, gallipots, cases, drawers, &c. So the genealogy of a family is more easily learnt when you begin at some great grandfather

as the root, and distinguish the stock, the large boughs, the lesser branches, the twigs, and the buds, till you come down to the present infants of the house. And indeed all sorts of arts and sciences taught in a method something of this kind, are more happily committed to the mind or memory.

I MIGHT give another plain simile to confirm the truth of this. What horse or carriage can take up and bear away all the various, rude and unwieldy loppings of a branchy tree at once? But if they are divided yet further, so as to be laid close, and bound up in a more uniform manner into several faggots, perhaps those loppings may be all carried as one single load or burden.

THE mutual dependance of things on each other, help the memory of both. A wise connection of the parts of a discourse in a rational method, gives great advantage to the reader or hearer, in order to his remembrance of it. Therefore many *mathematical* demonstrations in a long train, may be remembered much better than a heap of sentences which have no connection. The book of *Proverbs*, at least from the tenth chapter and onwards, is much harder to remember, than the book of *Psalms* for this reason: and some christians have told me, that they remember what is written in the epistle to the *Romans*, and that to the *Hebrews*,

Hebrews, much better than many others of the sacred epistles, because there is more exact method and connection observed in them.

HE that would learn to remember a sermon which he hears, should acquaint himself by degrees with the method in which the several important parts of it are delivered. It is a certain fault in a multitude of preachers, that they utterly neglect method in their harangues: or at least they refuse to render their method visible and sensible to the hearers. One would be tempted to think it was for fear lest their auditors should remember too much of their sermons, and prevent their preaching them three or four times over: but I have candour enough to persuade myself, that the true reason is, they imagine it to be a more modish way of preaching without particulars; I am sure it is a much more useless one. And it would be of great advantage both to the speaker and hearer, to have discourses for the pulpit cast into a plain and easy method, and the reasons or inferences ranged in a proper order, and that under the words, *first*, *secondly*, and *thirdly*, however they may be now fancied to sound unpolite or unfashionable: but archbishop *Tillotson* did not think so in his days.

4. *A frequent review and careful repetition* of the things we would learn, and an *abridgment of them in a narrow compass for this end*, has a great influence to fix them in the memory: therefore it is that the rules of *grammar*, and useful examples of the variation of words, and the peculiar forms of speech in any language, are so often appointed by the master as lessons for the scholars to be frequently repeated; and they are contracted into tables for frequent review, that what is not fixed in the mind at first, may be stamped upon the memory by a perpetual survey and rehearsal.

REPETITION is so very useful a practice, that *Mnemon*, even from his youth to his old age, never read a book without making some small points, dashes or hooks in the margin, to mark what parts of the discourse were proper for a review: and when he came to the end of a section or chapter, he always shut his book, and recollected all the sentiments or expressions he had remarked, so that he could give a tolerable *analysis and abstract* of every treatise he had read, just after he had finished it. Thence he became so well furnished with a rich variety of knowledge.

EVEN when a person is hearing a sermon, or a lecture, he may give his thoughts leave now and then to step back so far, as to
recollect

recollect the several heads of it from the beginning, two or three times before the lecture or sermon is finished: the omission or the loss of a sentence or two among the amplifications, is richly compensated by preserving in the mind the method and order of the whole discourse in the most important branches of it.

IF we would fix in the memory the discourses we hear, or what we design to speak, *let us abstract them into brief compends*, and review them often. Lawyers and Divines have need of such assistances: *they write down short notes or hints of the principal heads* of what they desire to commit to their memory, in order to preach or plead; for such abstracts and epitomies may be reviewed much sooner, and the several amplifying sentiments or sentences will be more easily invented or recollected in their proper places. The art of *short hand* is of excellent use for this as well as other purposes. It must be acknowledged, that those who scarcely ever take a pen in their hands to write short notes or hints of what they are to speak or learn, who never try to cast things into method, or to contract the survey of them, in order to commit them to their memory, had need have a double degree of that natural power of retaining and recollecting what they read or hear, or intend to speak.

DO not plunge yourself into other businesses or studies, amusements or recreations, immediately after you have attended upon instruction, if you can well avoid it. Get time if possible to recollect the things you have heard, that they may not be washed all away from the mind by a torrent of other occurrences or engagements, nor lost in the croud or clamour of other loud and importunate affairs.

TALKING over the things which you have read with your companions on the first proper opportunity you have for it, is a most useful manner of review or repetition, in order to fix them upon the mind. Teach them your younger friends, in order to establish your own knowledge while you communicate it to them. The animal powers of your tongue and of your ear, as well as your intellectual faculties, will all join together to help the memory. *Hermetas* studied hard in a remote corner of the land, and in solitude, yet he became a very learned man. He seldom was so happy as to enjoy suitable society at home, and therefore he talked over to the fields and the woods in the evening what he had been reading in the day, and found so considerable advantage by this practice, that he commended it to all his friends, since he could set his *probatum* to it for seventeen years.

5. *PLEASURE* and delight in the things we learn, gives great assistance towards the remembrance of them. Whatsoever therefore we desire that a child should commit to his memory, make it as pleasant to him as possible; endeavour to search his genius and his temper; and let him take in the instructions you give him, or the lessons you appoint him, as far as may be, in a way suited to his natural inclination. *Fabellus* would never learn any moral lessons till they were moulded into the form of some fiction or fable like those of *Æsop*, or till they put on the appearance of a parable, like those wherein our blessed *Saviour* taught the ignorant world: then he remembered well the emblematical instructions that were given him, and learnt to practise the moral sense and meaning of them. Young *Spectarius* was taught virtue, by setting before him a variety of examples of the various good qualities in human life; and he was appointed daily to repeat some story of this kind out of *Valerius Maximus*. The same lad was early instructed to avoid the common vices and follies of youth in the same manner. This is a-kin to the method whereby the *Lacedæmonians* trained up their children to hate drunkenness and intemperance, viz. by bringing a drunken man into their company, and shewing them
what

what a beast he had made of himself. Such visible and sensible forms of instruction will make long and useful impressions upon the memory.

CHILDREN may be taught to remember many things in a way of sport and play. Some young creatures have learnt their letters and syllables, and the pronouncing and spelling of words, by having them pasted or written upon many little flat tablets or dies. Some have been taught vocabularies of different languages, having a word in one tongue written on one side of these tablets, and the same word in another tongue on the other side of them.

THERE might be also many entertaining contrivances for the instruction of children in several things relating to *geometry*, *geography* and *astronomy*, in such alluring and illusory methods, which would make a most agreeable and lasting impression on their minds.

6. THE memory of useful things may receive considerable aid *if they are thrown into verse*: for the numbers and measures, and rhyme, according to the poesy of different languages have a considerable influence upon mankind, both to make them receive with more ease the things proposed to their observation, and preserve them longer in their remembrance. How many are there of the common affairs of human life,

life, which have been taught in early years by the help of rhyme, and have been like *nails fastened in a sure place* and riveted by daily use?

So the number of the days of each month are engraven on the memory of thousands by these four lines:

*Thirty days have September,
June and April and November:
February twenty-eight alone,
And all the rest have thirty-one.*

So lads have been taught frugality by surveying and judging of their own expenses by these three lines:

*Compute the pence but of one day's expence,
So many pounds and angels, groats and pence
Are spent in one whole year's circumference.*

For the number of days in a year is three hundred sixty-five, which number of pence make one pound, one angel, one groat, and one penny.

So have rules of health been prescribed in the book called *Schola Salernitana*, and many a person has preserved himself doubtless from evening gluttony, and the pains and diseases consequent upon it, by these two lines:

Ex

*Ex magnâ cœnâ stomacho fit maxima pœna ;
Ut sis nocte levis, fit tibi cœna brevis.*

Englified :

*To be easy all night
Let your supper be light :
Or else you'll complain
Of a stomach in pain:*

AND a hundred *proverbial* sentences in various languages are formed into rhyme or a verse, whereby they are made to stick upon the memory of old and young.

IT is from this principle that *moral rules* have been cast into a *poetic mould* from all antiquity. So the golden verses of the *Pythagoreans* in *Greek*? *Cato's distichs* *De Moribus* in *Latin*; *Lilly's precepts* to scholars called *Qui mihi*, with many others; and this has been done with very good success. A line or two of this kind recurring on the memory, have often guarded youth from a temptation to vice and folly, as well as put them in mind of their present duty.

IT is for this reason also that the *genders*, *declensions*, and *variations* of nouns and verbs have been taught in verse, by those who have complied with the prejudice of long custom, to teach *English* children the *Latin* tongue by rules written in *Latin*:
And

and truly those rude heaps of words and terminations of an unknown tongue, would have never been so happily learnt by heart by a hundred thousand boys without this smoothing artifice ; nor indeed do I know any thing else can be said with good reason, to excuse or relieve the obvious absurdities of this practice.

WHEN you would remember new things or words, *endeavour to associate and connect them with some words or things which you have well known before, and which are fixed and established in your memory.* This association of ideas is of great importance and force, and may be of excellent use in many instances of human life. One idea which is familiar to the mind, connected with others which are new and strange, will bring those new ideas into easy remembrance. *Maronides* had got the first hundred lines of *Virgil's Æneis* printed upon his memory so perfectly, that he knew not only the order and number of every verse from one to a hundred in perfection, but the order and number of every word in each verse also ; and by this means he would undertake to remember two or three hundred names of persons or things by some rational or fantastic connection between some word in the verse, and some letter, syllable, property, or accident of the name or thing to be remembered, even though they had been re-

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peated

peated but once or twice at most in his hearing. *Animato* practised much the same art of memory by getting the *Latin* names of twenty-two animals into his head according to the alphabet, viz. *asinus, basiliscus, canis, draco, elephas, felis, gryphus, hircus, juvencus, leo, mulus, noctua, ovis, panthera, quadrupes, rhinoceros, simia, taurus, ursus, xiphias, hyæna* or *yæna, zibetta*. Most of these he divided also into four parts, viz. head and body, feet, fins or wings and tail, and by some arbitrary or chimerical attachment of each of these to a word or thing which he desired to remember, he committed them to the care of his memory, and that with good success.

It is also by this *association of ideas*, that we may better imprint any new idea upon the memory by joining with it some *circumstance* of the *time, place, company, &c.* wherein we first observed, heard or learnt it. If we would recover an absent idea, it is useful to recollect those circumstances of time, place, &c. The substance will many times be recovered and brought to the thoughts by recollecting the shadow: a man recurs to our fancy by remembering his garment, his size, or stature, his office, or employment, &c. A beast, bird, or fish by its colour, figure or motion,
by

by the cage or court-yard, or cistern wherein it was kept.

To this head also we may refer that remembrance of names and things, which may be derived from our recollection of their *likeness to other things* which we know; either their resemblance in name, character, form, accident, or any thing that belongs to them. An idea or word which has been lost or forgotten, has been often recovered by hitting upon some other kindred word or idea, which has the nearest resemblance to it, and that in the letters, syllables or sound of the name, as well as properties of the thing.

IF we would remember *Hippocrates* or *Galen*, or *Paracelsus*, think of a physician's name, beginning with *H. G.* or *P.* If we will remember *Ovidius Naso*, we may represent a man with a great nose; if *Plato*, we may think upon a person with large shoulders; if *Crispus*, we shall fancy another with curled hair; and so of other things.

AND sometimes a new or strange idea may be fixed in the memory, by considering its *contrary* or *opposite*. So if we cannot hit on the word *Goliath*, the remembrance of *David* may recover it: or the name of a *Trojan* may be recovered by thinking of a *Greek*, &c.

8. IN such cases wherein it may be done, *seek after a local memory*, or a remembrance

of what you have read by the side or page where it is written or printed; whether the right or the left, whether at the top, the middle, or the bottom; whether at the beginning of a chapter or a paragraph, or the end of it. It has been some advantage for this reason, to accustom one's self to books of the same edition: and it has been of constant and special use to divines and private christians, to be furnished with several *Bibles* of the same edition; that wheresoever they are, whether in their chamber, parlour or study, in the younger or elder years of life, they may find the chapters and verses standing in the same parts of the page.

THIS is also a great conveniency to be observed by printers in the new editions of *Grammars, Psalms, Testaments, &c.* to print every chapter, paragraph or verse in the same part of the page as the former, that so it may yield an happy assistance to those young learners who find, and even feel the advantage of a *local memory*.

9. LET every thing we desire to remember be *fairly and distinctly written and divided into periods, with large characters in the beginning*, for by this means we shall the more readily imprint the matter and words on our minds, and recollect them with a glance, the more remarkable the writing appears to the eye. This *sense*

conveys the ideas to the fancy better than any other; and what we have *seen*, is not so soon forgotten as what we have only heard. What *Horace* affirms of the *mind* or *passions* may be said also of the *memory*.

*Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subjecta fidelibus, & quæ
Ipse sibi tradit spectator.*

Applied thus in *English* :

*Sounds which address the ear are lost and die
In one short hour; but that which strikes the eye
Lives long upon the mind; the faithful sight
Engraves the knowledge with a beam of light.*

For the assistance of weak memories, the first letters or words of every period, in every page, may be written in distinct colours; yellow, green, red, black, &c. and if you observe the same order of colours in the following sentences, it may be still the better. This will make a greater impression, and may much aid the memory.

UNDER this head we may take notice of the advantage which the memory gains, by having the *several objects of our learning drawn out into schemes and tables*; matters of *mathematical science* and *natural philosophy* are not only let into the understanding, but preserved in the memory by *figures and diagrams*. The situation

tuation of the several parts of the earth are better learnt by one day's conversing with a *map* or *sea-chart*, than by mere reading the description of their situation a hundred times over in books of *geography*. So the constellations in *astronomy* and their position in the heavens, are more easily remembered by hemispheres of the stars well drawn. It is by having such sort of memorials, figures and tables hung round our studies or places of residence or resort, that our memory of these things will be greatly assisted and improved, as I have shewn at large in the twentieth chapter, of the *Use of the Sciences*.

I MIGHT add here also, that *once writing over* what we design to remember, and giving due attention to what we write, will fix it more in the mind than reading it five times. And in the same manner, if we had a plan of the naked lines of longitude and latitude, projected on the *meridian* printed for this use, a learner might much more speedily advance himself in the knowledge of *geography* by his own drawing the figures of all the parts of the world upon it by imitation, than by many days survey of a map of the world so printed. The same also may be said concerning the constellations of heaven, drawn by the learner on a naked projection of the circles of the sphere upon the plane of the *equator*.

10. IT has sometimes been the practice of men to imprint names or sentences on their memory, by *taking the first letters of every word of that sentence, or of those names*, and making a new word out of them. So the name of the *Maccabees* is borrowed from the first letters of the *Hebrew* words which make that sentence *Mi Camoka Baelim Jehovah*, i. e. who is like thee among the gods? Which was written on their banners. *Jesus Christ* our saviour hath been called a *fish*, in *Greek* ΙΧΘΥΣ, by the fathers, because these are the first letters of those *Greek* words, *Jesus Christ, God's Son, the Saviour*. So the word *vibgyor* teaches us to remember the order of the seven original colours, as they appear by the sun-beams cast through a prism on a white paper, or formed by the sun in a rainbow, according to the different refrangibility of the rays, viz. *violet, indigo, blue, green, yellow, orange and red*.

IN this manner the *Hebrew* grammarians teach their students to remember the letters which change their natural pronunciation by the inscription of a *dagesh*, by gathering these six letters, *beth, gimel, daleth, caph, pe and thau*, into the word *begadkephat*; and that they might not forget the letters named *quiescent*, viz. *a, h, v and i*, they are joined in the word *abevi*.

So the universal and particular propositions in *logic*, are remembered by the words *barbara, celarent, darii, &c.*

OTHER artificial helps to memory may be just mentioned here,

DR. *Grey* in his book called *Memoria Technica*, has exchanged the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, for some consonants, *b, d, t, f, l, y, p, k, n*, and some vowels, *a, e, i, o, u*, and several diphthongs, and thereby formed words that denote numbers, which may be more easily remembered: and Mr. *Lowe* has improved his scheme in a small pamphlet called *Mnemonics delineated*, whereby in seven leaves he has comprized almost an infinity of things in science and in common life, and reduced them to a sort of measure like *Latin* verse; though the words may be supposed to be very barbarous, being such a mixture of vowels and consonants as are very unfit for harmony.

BUT after all, the very writers on this subject have confessed, that several of these *artificial* helps of memory are so cumbersome as not to be suitable to every temper or person; nor are they of any use for the delivery of a discourse by memory, nor of much service in learning the sciences: but they may be sometimes practised for the assisting our remembrance of certain sentences, numbers, or names.

C H A P. XVIII.

Of determining a QUESTION.

I. **W**HEN a subject is proposed to your thoughts, *consider whether it be knowable at all, or no*; and then whether it be not above the reach of your enquiry and knowledge in the *present state*; and remember that it is a great waste of time, to busy yourselves too much amongst *unsearchables*: the chief of these studies is to keep the mind humble, by finding its own ignorance and weakness.

II. **CONSIDER** again *whether the matter be worthy of your enquiry at all*; and then, how far it may be worthy of your present search and labour according to your age, your time of life, your station in the world, your capacity, your profession, your chief design and end. There are many things worthy enquiry to one man, which are not so to another; and there are things that may deserve the study of the same person in one part of life, which would be improper or impertinent at another. To read books of the *art of preaching*, or disputes about *church discipline*, are proper for a *theological student* in the end of his *academical studies*, but not

at the beginning of them. To pursue *mathematical* studies very largely may be useful for a *professor of philosophy*, but not for a *divine*.

III. CONSIDER *whether the subject of your enquiry be easy or difficult ; whether you have sufficient foundation or skill, furniture and advantages for the pursuit of it.* It would be madness for a young *statuary* to attempt at first to carve a *Venus* or a *Mercury*, and especially without proper tools. And it is equally folly for a man to pretend to make great improvements in *natural philosophy* without due experiments.

IV. CONSIDER *whether the subject be any ways useful or no, before you engage in the study of it : often put this question to yourselves, Cui bono ? to what purpose ? what end will it attain ? Is it for the glory of God, for the good of men, for your own advantage, for the removal of any natural or moral evil, for the attainment of any natural or moral good ? Will the profit be equal to the labour ? There are many subtle impertinencies learnt in the schools, many painful trifles even among the mathematical theorems and problems, many difficiles nugæ, or laborious follies of various kinds, which some ingenious men have been engaged in. A due reflection upon these things will call the mind away from*

from vain amusements, and save much time.

V. *CONSIDER* what tendency it has to make you wiser and better, as well as to make you more learned; and those questions which tend to wisdom and prudence in our conduct among men, as well as piety toward God, are doubtless more important, and preferable beyond all those enquiries which only improve our knowledge in mere speculations.

VI. If the question appear to be well worth your diligent application, and you are furnished with the necessary requisites to pursue it, then *consider whether it be dressed up and entangled in more words than is needful*, and contain or include *more complicated ideas than is necessary*: and if so, endeavour to reduce it to a greater simplicity and plainness, which will make the enquiry and argument easier and plainer all the way.

VII If it be stated in *an improper, obscure, or irregular form*, it may be meliorated by *changing the phrase, or transposing the parts of it*: but be careful always to keep the *grand and important point of enquiry the same* in your new stating the question. Little tricks and deceits of sophistry, by sliding in, or leaving out such words as entirely change the question, should be abandoned and renounced by all fair

fair disputants, and honest searchers after truth.

THE *stating a question with clearness and justice*, goes a great way many times toward the answering it. The greatest part of true knowledge lies in a *distinct perception of things which are in themselves distinct*; and some men give more light and knowledge by the bare *stating of the question* with perspicuity and justice, than others by *talking of it in gross confusion for whole hours together*. To *state a question* is but to separate and disentangle the parts of it from one another, as well as from every thing which doth not concern the question, and then to lay the disentangled parts of the question in due order and method: oftentimes without more ado this fully resolves the doubt, and shews the mind where the truth lies, without argument or dispute.

VIII. IF the question relate to an *axiom* or *first principle of truth*, remember that a long train of consequences may depend upon it, *therefore it should not be suddenly admitted and received*.

IT is not enough to determine the truth of a proposition, much less to raise it to the honour of an *axiom* or *first principle*; to say, that it has been believed through many ages, that it has been received by many nations, that it is almost universally acknowledged or nobody denies it, that
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it is established by human laws, or that temporal penalties or reproaches will attend the disbelief of it.

IX. *NOR is it enough to forbid any proposition the title of an axiom, because it has been denied by some persons, and doubted of by others; for some persons have been unreasonably credulous, and others have been as unreasonably sceptical.* Then only should a proposition be called an *axiom* or a *self-evident truth*, when by a moderate attention to the subject and predicate, their connection appears in so plain a light and so clear an evidence, as needs no third idea or middle term to prove them to be connected.

X. *WHILE you are in search after truth in questions of a doubtful nature, or such as you have not yet thoroughly examined, keep up a just indifference to either side of the question, if you would be led honestly into the truth: for a desire or inclination leaning to either side, biases the judgment strangely; whereas by this indifference for every thing but truth, you will be excited to examine fairly instead of presuming, and your assent will be secured from going beyond your evidence.*

XI. *FOR the most part people are born to their opinions, and never question the truth of what their family or their country, or their party profess. They clothe their minds as they do their bodies, after the*
fashion

fashion in vogue, nor one of a hundred ever examines their principles. It is suspected of *lukewarmness* to suppose examination necessary, and it will be charged as a *tendency to apostacy* if we go about to examine them. Persons are applauded for presuming they are in the right, and (as Mr. *Locke* saith) he that considers and enquires into the reason of things is counted a *foe to orthodoxy*, because possibly he may deviate from some of the received doctrines. And thus men without any industry or acquisition of their own, (lazy and idle as they are) inherit *local truths*, i. e. the truths of that place where they live, and are inured to assent without evidence.

THIS hath a long and unhappy influence; for if a man bring his mind once to be positive and fierce for propositions whose evidence he hath never examined, and that in matters of the greatest concernment, he will naturally follow this short and easy way of judging and believing in cases of less moment, and build all his opinions upon insufficient grounds.

XII. IN determining a question, especially when it is a matter of difficulty and importance, *do not take up with partial examination*, but turn your thoughts on all sides, to gather in all the light you can toward the solution of it. Take time, and use all the helps that are to be attained be-

fore you fully determine, except only where present necessity of action calls for speedy determination.

IF you would know what may be called a *partial examination*, take these instances, *viz.*

WHEN you examine an *object of sense*, or enquire into some matter of *sensation* at too *great a distance* from the object, or in an *inconvenient situation* of it, or under any *indisposition* of the *organs*, or any *disguise* whatsoever relating to the *medium* or the *organ* of the *object* itself; or when you examine it by *the sense only*, where others might be employed? Or when you enquire into it by *sense only*, without the use of the *understanding* and *judgment* and *reason*.

IF it be a question which is to be *determined* by *reason* and *argument*, then your examination is partial, when you turn the question only in one light and do not turn it on all sides; when you look upon it only in its relations and aspects to one sort of object and not to another; when you consider only the advantages of it and the reasons for it, and neglect to think of the reasons against it, and never survey its inconveniencies too: when you determine on a sudden, before you have given yourself a due time for weighing all circumstances, &c.

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AGAIN, If it be a *question of fact depending upon the report or testimony of men*, your examination is but partial, when you enquire only what one man or a few say, and avoid the testimony of others; when you only ask what those report who were not eye or ear-witnesses, and neglect those who saw and heard it; when you content yourself with mere loose and general talk about it, and never enter into particulars; or when there are many who deny the fact, and you never concern yourself about their reasons for denying it, but resolve to believe only those who affirm it.

THERE is yet further a fault in your partial examination of any question, when you resolve to determine it by *natural reason* only, where you might be assisted by *supernatural revelation*; or when you decide the point by *some word or sentence*, or by *some part of revelation*; without comparing it with *other parts*, which might give further light and better help to determine the meaning.

IT is also a culpable partiality, if you examine some *doubtful or pretended vision or revelation without the use of reason*; or without the use of that *revelation*, which is undoubted and sufficiently proved to be divine. These are all instances of *imperfect examination*, and we should never determine a question

a question by one or two lights, where we may have the advantage of three or four.

XIII. TAKE heed lest some *darling notion*, some *favourite hypothesis*, some *beloved doctrine*, or some *common but unexamined opinion*, be made a *test of the truth or falshood of all other propositions about the same subject*. Dare not build much upon such a notion or doctrine till it be very fully examined, accurately adjusted, and sufficiently confirmed. Some persons by indulging such a practice, have been led into long ranks of errors; they have found themselves involved in a train of mistakes, by taking up some pretty *hypothesis* or principle, either in *philosophy*, *politics*, or *religion*, upon slight and insufficient grounds, and establishing that as a test and rule by which to judge of all other things.

XIV. FOR the same reason, have a care of *suddenly determining any one question on which the determination of any kindred or parallel cases will easily or naturally follow*. Take heed of receiving any wrong turn in your early judgment of things; be watchful, as far as possible, against any false bias which may be given to the understanding, especially in younger years. The indulgence of some one silly opinion, or the giving credit to one foolish fable, lays the mind open to be imposed upon by many. The ancient *Romans* were taught to believe,

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that *Romulus* and *Remus* the founders of their state and empire, were *exposed in the woods and nursed by a wolf*: this story prepared their minds for the reception of any tales of the like nature relating to other countries. *Trogus Pompeius* would enforce the belief, that *one of the antient kings of Spain was also nursed and suckled by a hart*, from the fable of *Romulus* and *Remus*. It was by the same influence they learned to give up their hopes and fears to *omens* and *soothsaying*, when they were once persuaded that the greatness of their empire and the glory of *Romulus* their founder, were predicted by the happy omen of *twelve vultures appearing to him when he sought where to build the city*. They readily received all the following legends of *prodigies*, *auguries*, and *prognostics*, for many ages together, with which *Livy* has furnished his huge history.

So the child who is once taught to believe any one occurrence to be a *good* or *evil omen*, or any day of the month or week to be *lucky* or *unlucky*, hath a wide inroad made on the soundness of his understanding in the following judgments of his life; he lies ever open to all the silly impressions and idle tales of nurses, and imbibes many a foolish story with greediness, which he must unlearn again if ever he become acquainted with truth and wisdom.

XV. HAVE a care of *interesting your warm and religious zeal* in those matters which are not sufficiently evident in themselves, or which are not fully and thoroughly examined and proved : for this zeal, whether right or wrong, when it is once engaged, will have a powerful influence to establish your own minds in those doctrines which are really doubtful, and to stop up all the avenues of further light. This will bring upon the soul a sort of *sacred awe and dread of hearsay* ; with a divine concern to maintain whatever opinion you have espoused as divine, though perhaps you have espoused it without any just evidence, and ought to have renounced it as false and pernicious.

WE ought to be zealous for the most important points of our religion, *and to contend earnestly for the faith once delivered to the saints* ; but we ought not to employ this sacred fervour of spirit in the service of any article, till we have seen it made out with plain and strong conviction, that it is a necessary or important point of faith or practice, and is either an evident dictate of the light of nature, or an assured article of revelation. *Zeal* must not reign over the *powers of our understanding*, but obey them : God is the God of light and truth, a God of reason and order, and he never requires mankind to use their natural fa-

culties amiss for the support of his cause. Even the most mysterious and sublime doctrines of revelation, are not to be believed without a just reason for it; nor should our pious affections be engaged in the defence of them, till we have plain and convincing proof that they are certainly revealed, though perhaps we may never in this world attain to such clear and distinct ideas of them as we desire.

XVI. As a *warm zeal* ought never to be employed in the defence of any revealed truth, till our *reason* be well convinced of the *revelation*; so neither should *wit and banter, jest and ridicule*, ever be indulged to oppose or assault any doctrines of professed revelation, till *reason* has proved they are not really revealed. And even then, these methods should be used very seldom, and with the utmost caution and prudence. *Raillery* and *wit* were never made to answer our enquiries after truth, and to determine a question of rational controversy; though they may sometimes be serviceable, to expose to contempt those inconsistent follies which have been first abundantly refuted by argument; they serve indeed only to cover *nonsense with shame*, when *reason* has first proved it to be *mere nonsense*.

IT is therefore a silly and most unreasonable *test* which some of our *deists* have introduced to judge of divine revelation,
viz.

viz. *to try if it will bear ridicule and laughter.* They are effectually beaten in all their combats at the *weapons of men*, that is, *reason and argument*; and it would not be unjust (though it is a little uncourtly) to say that they would now attack our religion with the *talents of a vile animal*, that is, *grin and grimace.*

I CANNOT think that a *jester* or a monkey, a *droll* or a puppet, can be proper judges or deciders of controversy. That which dresses up all things in disguise, is not likely to lead us into any just sentiments about them. *Plato* or *Socrates*, *Cæsar* or *Alexander*, might have a fool's coat clapt upon any of them, and perhaps in this disguise, neither the wisdom of the one, nor the majesty of the other, would secure them from a sneer; this treatment would never inform us whether they were *kings* or *slaves*, whether they were *fools* or *philosophers*. The strongest reasoning, the best sense, and the politest thoughts, may be set in a most ridiculous light by this grinning faculty: the most obvious axioms of eternal truth may be dressed in a very foolish form, and wrapt up in artful absurdities by this talent; but they are truth and reason, and good sense still. *Euclid* with all his demonstrations might be so covered and overwhelmed with banter, that a *beginner in the mathematics* might be tempted to doubt,

whether his theorems were true or no, and to imagine they could never be useful. So weaker minds might be easily prejudiced against the noblest principle of truth and goodness: and the younger part of mankind might be beat off from the belief of the most serious, the most rational and important points even of natural religion, by the impudent jests of a profane wit. The moral duties of the civil life, as well as the articles of *christianity*, may be painted over with the colours of folly, and exposed upon a stage, so as to ruin all social and personal virtue among the gay and thoughtless part of the world.

XVII. It should be observed also, that these very men cry out loudly against the use of all severe *railing* and *reproach* in debates, and all *penalties* and *persecutions* of the state, in order to convince the minds and consciences of men, and determine points of truth and error. Now I renounce these penal and smarting methods of conviction as much as they do, and yet I think still these are every whit as wise, as just, and as good for this purpose, as *banter* and *ridicule*. Why should *public mockery* in print, or a *merry joke* upon a stage, be a better test of truth, than severe *railing* *sarcastms* and *public persecutions* and *penalties*? Why should more light be derived to the understanding by a *song* of scurrilous mirth, or a witty

witty *ballad*, than there is by a rude *cudgel*? When a professor of any religion is set up to be laughed at, I cannot see how this should help us to judge of the truth of his faith, any better than if he were scourged. The *jeers* of a theatre, the *pillory* and the *whipping-post*, are very near a-kin. When the person or his opinion is made the jest of the mob, or his back the shambles of the executioner, I think there is no more conviction in the one than in the other.

XVIII. BESIDES, supposing it is but barely possible that the great God should reveal his mind and will to men by miracle, vision or inspiration, it is a piece of *contempt* and *profane insolence*, to treat any tolerable or rational appearance of such a revelation with *jest* and *laughter*, in order to find whether it be divine or not. And yet if this be a *proper test of revelation*, it may be properly applied to the *true* as well as the *false*, in order to distinguish it. Suppose a *royal proclamation* were sent to a distant part of the kingdom, and some of the subjects should doubt whether it came from the king or no; is it possible that *wit* and *ridicule* should ever decide the point? Or would the prince ever think himself treated with just honour, to have his proclamation canvassed in this manner on a public stage, and become the sport of buffoons, in order

to determine the question, *Whether it is the word of a king or no?*

LET such sort of writers go on at their dearest peril, and *sport themselves in their own deceivings*; let them at their peril make a jest at the Bible, and treat the sacred articles of *Christianity* with scoff and merriment: but then let them lay aside all their pretences to *reason* as well as *religion*; and as they expose themselves by such writings to the neglect and contempt of men, so let them prepare to meet the majesty and indignation of God without timely repentance.

XIX. IN reading *philosophical, moral or religious controversies*, never raise your esteem of any opinion by the assurance and zeal wherewith the author asserts it, nor by the highest praises he bestows upon it: nor on the other hand, let your esteem of an opinion be abated, nor your aversion to it raised by the supercilious contempt cast upon it by a warm writer, nor by the sovereign airs with which he condemns it. Let the force of argument alone influence your assent or dissent. Take care that your soul be not warped or biased on one side or the other, by any strains of flattering or abusive language; for there is no question whatsoever, but hath some such sort of defenders and opposers. Leave those writers to their own follies, who practise thus upon the

weakness of their readers without argument ; leave them to triumph in their own fancied possessions and victories : it is oftentimes found that their possessions are but a heap of errors, and their boasted victories are but overbearing noise and clamour, to silence the *voice* of truth.

IN *philosophy* and *religion*, the *bigots* of all parties are generally the most positive, and deal much in this sort of arguments. Sometimes these are the weapons of *pride* ; for a haughty man supposes all his opinions to be infallible, and imagines the contrary sentiments are ever ridiculous and not worthy of notice. Sometimes these ways of talking are the mere arms of ignorance : the men who use them know little of the opposite side of the question, and therefore they exult in their own vain pretences to knowledge, as though no man of sense could oppose their opinion. They rail at an objection against their own sentiments, because they can find no other answer to it but railing. And men of learning by their excessive vanity, have been sometimes tempted into the same insolent practice as well as the ignorant.

YET let it be remembered too, that there are some truths so plain and evident, that the opposition to them is strange, unaccountable, and almost monstrous : and in vindication of such truths, a writer of
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good sense may sometimes be allowed to use a degree of assurance, and pronounce them strongly with an air of confidence, while he defends them with reasons of convincing force.

XX. SOMETIMES a *question* may be proposed, which is *of so large and extensive a nature, and refers to such a multitude of subjects, as ought not in justice to be determined at once by a single argument or answer*: as if one should ask me, Are you a professed disciple of the *Stoics*, or the *Platonists*? Do you give an assent to the principles of *Gassendus*, *Descartes*, or *Sir Isaac Newton*? Have you chosen the hypothesis of *Tycho* or *Copernicus*? Have you devoted yourself to the sentiments of *Arminius* or *Calvin*? Are your notions *episcopal*, *presbyterian* or *independant*? &c. I think it may be very proper in such cases not to give an answer in the gross, but rather to enter into a detail of particulars, and explain one's own sentiments. Perhaps there is no man, nor set of men upon earth whose sentiments I entirely follow. God has given me reason to judge for myself, and though I may see sufficient ground to agree to the greatest part of the opinions of one person or party, yet it does by no means follow that I should receive them all. Truth does not always go by the lump, nor does error tincture and spoil

spoil all the articles of belief that some one party professes.

SINCE there are difficulties attend every scheme of human knowledge, it is enough for me in the main to incline to that side which has the fewest difficulties; and I would endeavour, as far as possible, to correct the mistakes or the harsh expressions of one party, by softening and reconciling methods, by reducing the extremes, and by borrowing some of the best principles or phrases from another. *Cicero* was one of the greatest men of antiquity, and gives us an account of the various opinions of philosophers in his age; but he himself was of the *Eclectic* sect, and chose out of each of them such positions, as in his wisest judgment came nearest to the truth.

XXI WHEN you are called in the course of life or religion to judge and determine concerning any question, and to affirm or deny it, *take a full survey of the objection against it, as well as of the arguments for it, as far as your time and circumstances admit, and see on which side the preponderation falls.* If either the objections against any proposition, or the arguments for the defence of it, carry in them most undoubted evidence, and are plainly unanswerable, they will and ought to constrain the assent, though there may be many seeming probabilities on the other side, which
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at first sight would flatter the judgment to favour it. But where the reasons on both sides are very near of equal weight, there *suspension* or *doubt* is our duty, unless in cases wherein present determination or practice is required, and there we must act according to the present appearing preponderation of reasons.

XXII. *IN* matters of moment and importance, it is our duty indeed to seek after certain and conclusive arguments, (if they can be found) in order to determine a question: but where the matter is of little consequence, it is not worth our labour to spend much time in seeking after *certainities*; it is sufficient here, if *probable reasons* offer themselves. And even in matters of greater importance, especially where daily practice is necessary, and where we cannot attain any *sufficient* or *certain grounds* to determine a question on either side, we must then take up with such *probable arguments* as we can arrive at. But this general rule should be observed, *viz.* to take heed that our assent be no stronger, or rise no higher in the degree of it, than the *probable argument* will support.

XXIII. *THERE* are many things even in *religion*, as well as in *philosophy* and the *civil life*, which we believe with very *different degrees of assent*; and this is, or should be always regulated according to the different

rent degrees of evidence which we enjoy: and perhaps there are a thousand gradations in our assent to the things we believe, because there are thousands of circumstances relating to different questions, which increase or diminish the evidence we have concerning them, and that in matters both of reason and revelation.

I believe there is a God, and that obedience is due to him from every reasonable creature: this I am most fully assured of, because I have the strongest evidence, since it is the plain dictate both of reason and revelation.

AGAIN. *I believe there is a future resurrection of the dead, because scripture tells us so in the plainest terms, though reason says nothing of it. I believe also, that the same matter of our bodies which died (in part at least) shall arise; but I am not so fully assured of this circumstance, because the revelation of it is not quite so clear and express. Yet further, I believe that the good men who were acquainted here on earth, shall know each other in heaven; but my persuasion of it is not absolutely certain, because my assent to it arises only from circumstantial reasonings of men upon what God has told us, and therefore my evidences are not strong beyond a possibility of mistake. This direction cannot be too often repeated, that our assent ought always*
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to keep pace with our evidence ; and our belief of any proposition, should never rise higher than the proof or evidence we have to support it, nor should our faith run faster than right reason can encourage it.

XXIV. PERHAPS it will be *objected* here, *why then does our Saviour in the histories of the gospel, so much commend a strong faith ; and lay out both his miraculous benefits and his praises upon some of those poor creatures of little reasoning, who profess an assured belief of his commission and power to heal them ?*

I answer, The God of nature has given every man *his own reason* to be the judge of evidence to himself in particular, and to direct his assent in all things about which he is called to judge ; and even the matters of revelation are to be believed by us, because our reason pronounces the revelation to be true. Therefore the great God will not, or cannot, in any instances, require us to assent to any thing without reasonable or sufficient evidence ; nor to believe any proposition more strongly, than what our evidence for it will support. We have therefore abundant ground to believe, that those persons of whom our Saviour requires such a *strong faith*, or whom he commends for their strong faith, had as strong and certain evidence of his power and commission, from the credible and incontestable reports they had heard of his miracles, which

which were wrought on purpose to give evidence to his commission *. Now in such a case, both this strong faith and the open profession of it were very worthy of public encouragement and praise from our Saviour, because of the great and public opposition which the magistrates and the priests, and the doctors of the age made against *Jesus* the man of *Nazareth*, when he appeared as the *Messiah*.

AND besides all this it may be reasonably supposed, with regard to some of those strong exercises of faith which are required and commended, that these believers had some further hints of inward evidence and immediate revelation from God himself; as when *St. Peter* confesses *Christ* to be the *Son of God*, *Matt. xvi. 16, 47.* our blessed Saviour commends him, saying, *blessed art thou, Simon Bar-jona*; but he adds, *flesh and blood hath not revealed it unto thee, but my Father who is in heaven.*

* When our Saviour gently reproves *Thomas* for his unbelief, *John xx. 29.* he does it in these words, *Because thou hast seen me, Thomas, thou hast believed: blessed are they who have not seen, and yet have believed, i. e. blessed are they who, though they have not been favoured with the evidence of their senses as thou hast been, yet have been convinced by the reasonable and sufficient moral evidence of the well grounded report of others, and have believed in me upon that evidence.* Of this *moral evidence* *Mr. Ditton* writes exceedingly well, in his book of the *Resurrection of Christ*.

AND the same may be said concerning the *faith of miracles*, the exercise whereof was sometimes required of the disciples and others, *i. e.* when by inward and divine influences God assured them such miracles should be wrought, their obedience to and compliance with these divine illuminations was expected and commended. Now this supernatural inspiration, carried sufficient *evidence* with it to them, as well as to the ancient prophets, though we who never felt it are not so capable to judge and distinguish it.

XXV. WHAT is said before concerning *truth* or *doctrines*, may be also affirmed concerning *duties*; the reason of both is the same; as the one are *truths for our speculation*, the others are *truths for our practice*. *Duties* which are expressly required in the plain language of scripture, or dictated by the most evident reasoning upon first principles, ought to bind our consciences more than those which are but dubiously inferred, and that only from occasional occurrences, incidents and circumstances: as for instance, I am certain that *I ought to pray to God*; my conscience is bound to this, because there are most evident commands for it to be found in scripture, as well as to be derived from reason. I believe also that I may *pray to God, either by a written form, or without one*, because neither reason nor revelation expressly requires either of these modes
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of prayer at all times, or forbids the other. I cannot therefore bind my conscience to practise the one, so as utterly to renounce the other; but I would practise either of them, as my reason and other circumstances direct me.

AGAIN, I believe *that Christians ought to remember the death of Christ by the symbols of bread and wine*; and I believe *there ought to be pastors in a Christian church, some way ordained or set apart to lead the worship, and to bless and distribute the elements*; but the last of these practices is not so expressly directed, prescribed, and required in scripture as the former; and therefore I feel my conscience evidently bound *to remember the death of Christ* with some society of Christians or other, since it is a most plain command, though their methods of ordaining a pastor be very different from other men, or from my own opinion; or whether the person who distributes these elements, be only an occasional or a settled administrator; since none of these things are plainly determined in scripture. I must not omit or neglect an express command, because some unnecessary circumstances are dubious. And I trust I shall receive approbation from the God of nature, and from *Jesus* my judge at the last day, if I have endeavoured in this manner to believe and practise every thing in proportion to the degree of evidence

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which God has given me about it, or which he has put me into a capacity to seek and obtain in the age and nation wherein I live.

Query, WHETHER the obstinate *Deists* and the *Fatalists* of *Great-Britain*, will find sufficient apology from this principle? But I leave them to venture the awful experiment.

XXVI. WE may observe these *three rules*, in judging of probabilities which are to be determined by reason, relating either to things past, or things to come.

1. THAT which *agrees most with the constitution of nature* carries the greatest probability in it, where no other circumstance appears to counterpoise it: as, if I let loose a greyhound within sight of a hare upon a large plain, there is great probability the greyhound will seize her; that a thousand sparrows will fly away at the sight of a hawk among them.

2. THAT which is *most conformable to the constant observations of men*, or to *experiments frequently repeated*, is most likely to be true: as, that a winter will not pass away in *England* without some frost and snow; that if you deal out great quantities of strong liquor to the mob, there will be many drunk; that a large assembly of men will be of different opinions in any doubtful point; that a thief will make his escape out of prison, if the doors of it are unguarded at midnight.

3. IN matters of fact which are past or present, where neither nature, nor observation, nor custom gives us any sufficient information on either side of the question, there we may derive a probability *from the attestation of wise and honest men* by word or writing, or the *concurring witnesses of multitudes* who have seen and known what they relate, &c. This *testimony* in many cases will arise to the degree of *moral certainty*. So we believe that the plant *tea* grows in *China*; and that the emperor of the *Turks* lives at *Constantinople*; that *Julius Cæsar* conquered *France*, and that *Jesus* our Saviour lived and died in *Judæa*; that thousands were converted to the *Christian faith* in a century after the death of *Christ*; and that the *books* which contain the *Christian religion*, are certain histories and epistles which were written about a thousand years ago. There is an infinite variety of such propositions which can admit of no reasonable doubt, though they are not matters which are directly evident to our own senses, or our mere reasoning powers.

XXVII. WHEN a point hath been well examined, and our own judgment settled upon just arguments in our manly age, and after a large survey of the merits of the cause, it would be a *weakness for us always to continue fluttering in suspense*. We ought therefore to stand firm in such well esta-

blished principles, and not be tempted to change and alter for the sake of every difficulty, or every occasional objection. We are *not to be carried about with every flying doctrine, like children tossed to and fro, and wavering with the wind.* It is a good thing to have the heart established with grace, not with meats; that is, in the great doctrines of the gospel of grace and in *Jesus Christ*, who is the same yesterday, to-day and for ever; but it is not so necessary in the more minute matters of religion, such as *meats* and *drinks*, *forms* and *ceremonies*, which are of less importance, and for which scripture has not given such express directions. This is the advice of the great apostle, *Eph. iv. 14. Heb. xiii. 8, 9.*

IN short, those truths which are the springs of daily practice, should be settled as soon as we can with the exercise of our best *powers*, after the state of manhood: but those things wherein we may possibly mistake, should never be so absolutely and finally established and determined, as though we were infallible. If the *Papists* of *Great-Britain* had maintained such a resolute establishment and assurance in the days of king *Henry the VIIIth* or queen *Elizabeth*, there never had been a reformation: nor would any *Heathen* have been converted even under the ministry of *St. Paul*, if their obstinate settlement in their idolatries had kept their

their eyes shut against all further light. Yet this should not hinder us from settling our most important principles of faith and practice, where reason shines with its clearest evidence, and the word of God plainly determines truth and duty.

XXVII. BUT let us remember also, that though the gospel be an *infallible revelation*, we are but *fallible interpreters*, when we determine the sense even of some important propositions written there; and therefore though we seem to be established in the belief of any particular sense of scripture, and though there may be just calls of providence to profess and subscribe it, yet there is no need that we should resolve or promise, subscribe or swear never to change our mind; since it is possible in the nature and course of things, we may meet with such a solid and substantial objection, as may give us a quite different view of things from what we once imagined, and may lay before us sufficient evidence of the contrary. We may happen to find a fairer light cast over the same scriptures, and see reason to alter our sentiments even in some points of moment. *Sic sentio, sic sentiam*, i. e. *so I believe, and so I will believe*, is the prison of the soul for life time, and a bar against all the improvements of the mind. To impose such a profession on other men in matters not absolutely necessary and not

absolutely certain, is a criminal usurpation and tyranny over faith and conscience, and which none has power to require but an infallible dictator.

C H A P. XIX.

Of enquiring into CAUSES and EFFECTS.

SOME effects are found out by their causes, and some causes by their effects. Let us consider both these.

I. *WHEN* we are enquiring into the causes of any particular effect or appearance, either in the world of nature, or in the civil or moral concerns of men, we may follow this method.

1. CONSIDER what effects or appearances you have known of a *kindred nature*, and what have been the *certain* and *real* causes of them; for *like effects* have generally *like causes*, especially when they are found in the *same* sort of *subjects*.

2. CONSIDER what are the several *possible causes* which may produce such an effect: and find out by some circumstances, how many of those possible causes are excluded

cluded in this particular case : thence proceed by degrees to the *probable causes*, till a more close attention and inspection shall exclude some of them also, and lead you gradually to the *real and certain cause*.

3. CONSIDER what *things preceded* such an event or appearance, which might have any influence upon it ; and though we cannot certainly determine the cause of any thing only from its going before the effect, yet among the many *forerunners*, we may probably light upon the true cause, by further and more particular enquiry.

4. CONSIDER whether *one cause* be sufficient to produce the effect, or whether it does not require a *concurrence of several causes* ; and then endeavour as far as possible, to adjust the degrees of influence that each cause might have in producing the effect, and the proper agency and influence of each of them therein.

So in *natural philosophy*, if I would find what are the principles or causes of that sensation which we call *heat* when I stand near the fire ; here I shall find it is necessary that there be an agency of the particles of fire on my flesh, either mediately by themselves, or at least by the intermediate air ; there must be a particular sort of motion and vellication imprest upon my nerves ; there must be a derivation of that motion to the brain ; and there must be an

attention of my soul to this motion: if either of these are wanting, the sensation of *heat* will not be produced.

So in the *moral world*, if I enquire into the *revolution of a state or kingdom*, perhaps I find it brought about by the tyranny or folly of a prince, or by the disaffection of his own subjects; and this disaffection and opposition may arise, either upon the account of impositions in religion, or injuries relating to their civil rights: or the revolution may be effected by the invasion of a foreign army, or by the opposition of some person at home or abroad that lays claim to the government, &c. or a hero who would guard the liberties of the people; or by many of these concurring together; then we must adjust the influences of each as wisely as we can, and not ascribe the whole event to one of them alone.

II. *WHEN we are enquiring into the effects of any particular cause or causes*, we may follow this method.

1. CONSIDER diligently the *nature of every cause* apart, and observe what effect every part or property of it will tend to produce.

2. CONSIDER the *causes united together* in their several natures, and ways of operation; enquire how far the powers or properties of one, will hinder or promote the effects of the other, and wisely balance the proportions of the influence.

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3. CONSIDER what the *subject* is, in or upon which the cause is to operate: for the same cause on different subjects will oftentimes produce different effects, as the *sun* which softens *wax* will harden *clay*.

4. BE frequent and diligent in *making all proper experiments*; in setting such causes at work whose effects you desire to know, and putting together in an orderly manner, such things as are most likely to produce some useful effects, according to the best survey you can take of all the concurring causes and circumstances.

5. OBSERVE carefully all the *events* which happen either by an occasional concurrence of various causes, or by the industrious application of knowing men: and when you see any happy effect certainly produced, and often repeated, treasure it up together with the known causes of it, amongst your improvements.

6. TAKE a just survey of all *the circumstances* which attend the operation of any cause or causes, whereby any special effect is produced, and find out as far as possible, how far any of those circumstances had a tendency either to obstruct or promote, or change those operations, and consequently how far the effect might be influenced by them.

IN this manner, *physicians* practise and improve their skill. They consider the various

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ous known effects of *particular herbs or drugs*, they meditate what will be the effect of their *composition*, and whether the virtues of the one will exalt or diminish the force of the other, or correct any of its nocent qualities. Then they observe the native constitution, and the present temper or circumstances of the patient, and what is likely to be the effect of such a medicine on such a patient. And in all uncommon cases they make wise and cautious experiments, and nicely observe the effects of particular compound medicines on different constitutions, and in different diseases; and by these treasuries of just observations, they grow up to an honourable degree of skill in the *art of healing*.

So the *preacher* considers the *doctrines* and *reasons*, the *precepts*, the *promises*, and *threatenings* of the word of God, and what are the natural effects of them upon the mind; he considers what is the *natural tendency of such a virtue or such a vice*; he is well apprized that the representation of some of these things may convince the understanding, some may terrify the conscience, some may allure the slothful, and some encourage the desponding mind: he observes the *temper of his hearers*, or of any particular person that converses with him about things sacred, and he judges what will be the effects of each representation

on such persons; he reviews and recollects what have been the effects of some special parts and methods of his ministry; and by a careful survey of all these, he attains greater degrees of skill in his sacred employment.

Note, IN all these cases, we must distinguish those causes and effects which are *naturally* and *necessarily connected* with each other, from those which have only an *accidental* or *contingent connection*. Even in those causes where the effect is but *contingent*, we may sometimes arrive at a very high degree of probability; yet we cannot arrive at such certainty as where the causes operate by an *evident* and *natural necessity*, and the effects necessarily follow the operation.

See more on this subject, *logic*, Part II. Chap. V. Sect. 7. *Of the Principles and Rules of judging concerning things past, present and to come, by the mere use of reason.*

C H A P. XX.

Of the Sciences, and their use in particular professions.

I. **T**HE *best way to learn any science, is to begin with a regular system, or a short and plain scheme of that science, well drawn up into a narrow compass, omitting the deeper and more abstruse parts of it, and that also under the conduct and instruction of some skilful teacher. Systems are necessary to give an entire and comprehensive view of the several parts of any science, which may have a mutual influence toward the explication or proof of each other: whereas if a man deals always and only in essays and discourses on particular parts of a science, he will never obtain a distinct and just idea of the whole, and may perhaps omit some important part of it after seven years reading of such occasional discourses.*

FOR this reason, young students should apply themselves to their *systems* much more than *pamphlets*. That man is never so fit to judge of *particular subjects* relating to any science, who has never taken a survey of the *whole*.

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IT is the remark of an ingenious writer, should a barbarous *Indian*, who had never seen a *palace* or a *ship*, view their separate and disjointed parts, and observe the pillars, doors, windows, cornices and turrets of the *one*, or the prow and stern, the ribs and masts, the ropes and shrouds, the sails and tackle of the *other*, he would be able to form but a very lame and dark idea of either of those excellent and useful inventions. In like manner, those who contemplate only the fragments or pieces broken off from any science dispersed in short unconnected discourses, and do not discern their relation to each other, and how they may be adapted, and by their union procure the delightful symmetry of a regular scheme, can never survey an entire body of truth, but must always view it as deformed and dismembered; while their ideas, which must be ever indistinct and often repugnant, will lie in the brain unsorted, and thrown together without order or coherence: such is the knowledge of those men who live upon the scraps of the sciences.

A YOUTH of genius and lively imagination, of an active and forward spirit, may form within himself some alluring scenes and pleasing schemes in the beginning of a science, which are utterly inconsistent with some of the necessary and substantial parts of it which appear in the middle or the
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end. And if he never read and pass through the whole, he takes up and is satisfied with his own hasty pleasing schemes, and treasures these errors up amongst his solid acquisitions; whereas his own labour and study farther pursued would have shewn him his early mistakes, and cured him of his self-flattering delusions.

HENCE it comes to pass, that we have so many *half-scholars* now-a-days, and there is so much confusion and inconsistency in the notions and opinions of some persons, because they devote their hours of study entirely to short *essays* and *pamphlets*, and cast contempt upon *systems* under a pretence of greater politeness; whereas the true reason of this contempt of systematical learning, is mere laziness and want of judgment.

II. AFTER we are grown well acquainted with a *short system* or *compendium* of a science which is written in the plainest and most simple manner, *it is then proper to read a larger regular treatise on that subject*, if we design a complete knowledge and cultivation of it: and either while we are reading this *larger system*, or after we have done it, then *occasional discourses* and *essays* upon the particular subjects and parts of that science may be read with the greatest profit: for in these *essays* we may often find very considerable corrections and improvements
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of what these *compend*s, or even the *larger systems* may have taught us, mingled with some mistakes.

AND these corrections or improvements should be as remarks, adjoining by way of note or commentary in their proper places, and superadded to the regular treatise we have read. Then a studious and judicious review of the whole, will give us a tolerable acquaintance with that science.

III. *IT is a great happiness to have such a tutor, or such friends and companions at hand*, who are able to inform us what are the best books written on any science, or any special part of it. For want of this advantage, many a man has wasted his time in reading over perhaps some whole volumes, and learnt little more by it than to know, that those volumes were not worth his reading.

IV. As for the *languages*, they are certainly best learned in the younger years of life. The memory is then most empty and unfurnished, and ready to receive new ideas continually. We find that children in two years time after they are born, learn to speak their native tongue.

V. *The more abstracted sciences*, which depend more upon the understanding and judgment, and which deal much in abstracted ideas, *should not be imposed upon children too soon*; such are *logic, metaphysics, ethics, politics,*

politics, or the depths and difficulties of *grammar* and *criticism*. Yet it must be confessed, the first rudiments of *grammar* are necessary, or at least very convenient to be known when a youth learns a new language; and some general easy principles and rules of morality and divinity are needful, in order to teach a child his duty to God and man; but to enter far into abstracted reasonings on these subjects, is beyond the capacity of children.

VI THERE are *several of the sciences*, that will more agreeably employ our younger years, and the general parts of them may be easily taken in by boys. The first principles and easier practices of *arithmetic*, *geometry*, *plain trigonometry*, *measuring heights*, *depths*, *lengths*, *distances*, &c. The rudiments of *geometry* and *astronomy*, together with something of *mechanics*, may be easily conveyed into the minds of acute young persons from nine or ten years old and upward. These studies may be entertaining and useful to young ladies as well as to gentlemen, and to all those who are bred up to the learned professions. The *fair sex* may intermingle those with the operations of the needle, and the knowledge of domestic life. *Boys* may be taught to join them with their rudiments of *grammar*, and their labour in the languages. And even those who never learn any language but

but their mother-tongue may be taught these sciences with lasting benefit in early days.

THAT this may be done with ease and advantage take these three reasons.

(1.) BECAUSE they depend so much upon schemes and numbers, images, lines and figures, and sensible things, that the imagination or fancy will greatly assist the understanding, and render the knowledge of them much more easy.

(2.) THESE studies are so pleasant, that they will make the dry labour of learning words, phrases and languages more tolerable to boys in a *Latin* school by this most agreeable mixture. The employment of youth in these studies will tempt them to neglect many of the foolish plays of childhood, and they will find sweeter entertainment for themselves and their leisure hours by a cultivation of these pretty pieces of alluring knowledge.

(3.) THE knowledge of these parts of science are both easy and worthy to be retained in memory by all children when they come to manly years, for they are useful through all the parts of human life: they tend to enlarge the understanding early, and to give a various acquaintance with useful subjects betimes. And surely it is best, as far as possible, to train up children in the knowledge of those things which they should

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never forget, rather than to let them waste years of life in trifles, or in hard words which are not worth remembering.

AND here by the way I cannot but wonder, that any author in our age should have attempted to teach any of the exploded *physics* of *Descartes*, or the nobler inventions of Sir *Isaac Newton*, in his hypothesis of the heavenly bodies and their motions, in his doctrine of light and colours, and other parts of his *physiology*, or to instruct children in the knowledge of the theory of the heavens, earth and planets, without any *figures* or *diagrams*. Is it possible to give a boy or a young lady the clear, distinct and proper apprehensions of these things without lines and figures to describe them? Does not their understanding want the aid of fancy and images to convey stronger and juster ideas of them to the inmost soul: or do they imagine that youth can penetrate into all these beauties and artifices of nature without these helps, which persons of maturer age find necessary for that purpose? I would not willingly name the books, because some of the writers are said to be gentlemen of excellent acquirements.

VII. AFTER we have first learnt and gone through any of those arts or sciences which are to be explained by diagrams, figures and schemes, such as *geometry*,
geography,

geography, astronomy, optics, mechanics, &c. we may best preserve them in memory by having those schemes and figures in large sheets of paper hanging always before the eye in closets, parlours, halls, chambers, entries, stair-cases, &c. Thus the learned images will be perpetually imprest on the brain, and will keep the learning that depends upon them alive and fresh in the mind through the growing years of life: the mere diagrams and figures will ever recal to our thoughts those theorems, problems, and corollaries, which have been demonstrated by them.

It is incredible how much *geography* may be learnt this way by the two terrestrial hemispheres, and by particular maps and charts of the *coasts* and *countries* of the earth happily disposed round about us. Thus we may learn also the *constellations* by just projections of the celestial sphere, hung up in the same manner. And I must confess, for the bulk of learners of *astronomy*, I like that projection of the stars best, which includes in it all the stars in our horizon, and therefore it reaches to the $38\frac{1}{2}$ degree of *southern latitude*, though its center is the *north-pole*. This gives us a better view of the heavenly bodies as they appear every night to us, and it may be made use of with a little instruction, and with ease, to serve for a

nocturnal, and shew the true hour of the night.

BUT remember, that if there be any colouring upon these maps or projections, it should be laid on so thin, as not to obscure or conceal any part of the lines, figures or letters: whereas most times they are daubed so thick with gay and glaring colours, and hung up so high above the reach of the eye that should survey and read them, as though their only design were to make a gaudy show upon the wall, and they hung there merely to cover the naked plaister or wainscot.

THOSE sciences which may be drawn out into tables may also be thus hung up and disposed in proper places, such as, *brief abstracts of history, chronology, &c.* and indeed, the schemes of any of the arts or sciences may be analysed in a sort of *skeleton*, and represented upon tables, with the various dependencies and connections of their several parts and subjects that belong to them. Mr. *Solomon Lowe* has happily thrown the *grammar* of several languages into such tables; and a frequent review of these *abstracts* and *epitomes* would tend much to imprint them on the brain, when they have been once well learned; this would keep those learned traces always open, and assist the weakness of a labouring memory. In this manner may a scheme
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of the *scripture history* be drawn out, and perpetuate those ideas in the mind with which our daily reading furnishes us.

VIII. EVERY man who pretends to the character of a *scholar*, should attain *some general and superficial idea of most or all the sciences*: for there is a certain connection among the various parts of human knowledge, so that some notions borrowed from any one science may assist our acquaintance with any other, either by way of *explication, illustration or proof*: though there are some sciences conjoined by a much nearer affinity than others.

IX. LET those parts of every science be chiefly studied at first, and reviewed afterwards, which have a more direct tendency to assist our proper profession, as men, or our general profession as christians, always observing what we ourselves have found most necessary and useful to us in the course of our lives. Age and experience will teach us to judge which of the sciences, and which parts of them, have been of greatest use, and are most valuable; but in younger years of life we are not sufficient judges of this matter, and therefore should seek advice from others who are elder.

X. THERE are three learned professions among us, viz. *divinity, law, and medicine*. Though every man who pretends to be a scholar or a gentleman should so far ac-

quaint himself with a superficial scheme of all the sciences, as not to stand amazed like a mere stranger at the mention of the common subjects that belong to them; yet there is no necessity for every man of learning to enter into their difficulties and deep recesses, nor to climb the heights to which some others have arrived. The knowledge of them in a proper measure may be happily useful to every profession, not only because all arts and sciences have a sort of communion and connection with each other, but it is an angelic pleasure to grow in knowledge, it is a matter of honour and esteem, and renders a man more agreeable and acceptable in every company.

BUT let us survey several of them more particularly, with regard to the learned professions: and first of the *mathematics*.

XI. THOUGH I have so often commended *mathematical studies*, and particularly the speculations of *arithmetic* and *geometry*, as a means to fix a wavering mind, to beget an habit of attention, and to improve the faculty of reason; yet I would by no means be understood to recommend to all a pursuit of these sciences, to those extensive lengths to which the moderns have advanced them. This is neither necessary nor proper for any students, but those few who shall make these studies their chief profession and business of life, or those gentlemen

men whose capacities and turn of mind are suited to these studies, and have all manner of advantage to improve in them.

THE general principles of *arithmetic*, *algebra*, *geometry* and *trigonometry*, of *geography*, of modern *astronomy*, *mechanics*, *statics* and *optics*, have their valuable and excellent uses, not only for the exercise and improvement of the faculties of the mind, but the subjects themselves are very well worth our knowledge in a moderate degree, and are often made of admirable service in human life. So much of these subjects as Dr. *Wells* has given us in his three volumes, entitled, *The Young Gentleman's Mathematics*, is richly sufficient for the greatest part of scholars or gentlemen; though perhaps there may be some single treatises, at least on some of these subjects, which may be better written and more useful to be perused than those of that learned author.

BUT a penetration into the abstruse difficulties and depths of modern *algebra* and *fluxions*, the various *methods of quadratures*, the *mensuration* of all manner of *curves*, and their mutual *transformation*, and twenty other things that some modern *mathematicians* deal in, are not worth the labour of those who design either of the three learned professions, *divinity*, *law*, or *physic*, as the business of life. This is

the sentence of a considerable man, *viz.* Dr. *George Cheyne*, who was a very good proficient and writer on these subjects : he affirms, that they are but barren and airy studies for a man entirely to live upon, and that for a man to indulge and riot in these exquisitely bewitching contemplations, is only proper for public professors, or for gentlemen of estates, who have a strong propensity this way, and a genius fit to cultivate them.

BUT, says he, to own a great but grievous truth, though they may quicken and sharpen the invention, strengthen and extend the imagination, improve and refine the reasoning faculty, and are of use both in the necessary and the luxurious refinement of *mechanical* arts ; yet having no tendency to rectify the will, to sweeten the temper, or mend the heart, they often leave a stiffness, a positiveness and sufficiency on weak minds, which is much more pernicious to society, and to the interests of the great end of our being, than all their advantages can recompense. He adds further concerning the launching into the depth of the studies, that they are apt to beget a secret and refined pride, and over-weening and over-bearing vanity, the most opposite temper to the true spirit of the gospel. This tempts them to presume on a kind of omniscience in respect to their fellow-creatures,

creatures, who have not risen to their elevation; nor are they fit to be trusted in the hands of any but those who have acquired a humble heart, a lowly spirit, and a sober and teachable temper. See Dr. *Cheyne's* preface to his *Essay on Health and long Life*.

XII. SOME of the practical parts of *geometry, astronomy, dialling, optics, statics, mechanics, &c.* may be agreeable entertainments and amusements to students in every profession at leisure hours, if they enjoy such circumstances of life as to furnish them with conveniencies for this sort of improvement: but let them take great care, lest they entrench upon more necessary employments, and so fall under the charge and censure of wasted time.

YET I cannot help making this observation, that where students, or indeed any young gentlemen, have in their early years made themselves masters of a variety of elegant problems in the *mathematic* circle of knowledge, and gained the most easy, neat, and entertaining experiments in *natural philosophy*, with some short and agreeable speculations or practices in any *other of the arts or sciences*, they have hereby laid a foundation for the esteem and love of mankind among those with whom they converse, in higher or lower ranks of life; they have been often guarded by this means from the temptation of innocent pleasures,
and

and have secured both their own hours and the hours of their companions, from running to waste in sauntering and trifles, and from a thousand impertinences in silly dialogues. Gaming and drinking, and many criminal and foolish scenes of talk and action, have been prevented by these innocent and improving elegancies of knowledge.

XIII. HISTORY is a necessary study in the supreme place for gentlemen who deal in *politics*. The government of nations, and distressful and desolating events which have in all ages attended the mistakes of politicians, should be ever present on their minds, to warn them to avoid the like conduct. *Geography* and *chronology*, which precisely informs us of the *place* and *time* where such transactions or events happened, are the eyes of *history*, and of absolute necessity in some measure to attend it.

BUT *history*, so far as relates to the affairs of the Bible, is as necessary to divines as to gentlemen of any profession. It helps us to reconcile many difficulties in scripture, and demonstrates a divine providence. Dr. *Prideaux's Connection of the Old and New Testament*, is an excellent treatise of this kind.

XIV. AMONG the smaller histories, *biography*, or the memoirs of the lives of great and good men, has a high rank in my esteem, as worthy of the perusal of every person

person who devotes himself to the study of *divinity*. Therein we frequently find our holy religion reduced to practice, and many parts of christianity shining with a transcendent and exemplary light. We learn there how deeply sensible great and good men have been of the ruins of human nature by the first apostasy from God, and how they have toiled and laboured, and turned themselves on all sides, to seek a recovery in vain, till they have found the *gospel of Christ* an all-sufficient relief. We are there furnished with effectual and unanswerable evidences that the *religion of Jesus*, with all its self-denials, virtues and devotions, is a very practicable thing, since it has been carried to such a degree of honour by some wise and holy men. We have been there assured, that the pleasures and satisfactions of the *christian life*, in its present practice and its future hopes, are not the mere raptures of fancy and enthusiasm, when some of the strictest professors of reason have added the sanction of their testimony.

IN short, the *lives* or *memoirs* of persons of piety well written, have been of infinite and unspeakable advantage to the disciples and professors of Christianity, and have given us admirable instances and rules how to resist every temptation of a soothing or a frowning world, how to practise important and difficult duties, how to love God
above

above all, and to love our neighbours as ourselves, to live by the faith of the Son of God, and to die in the same faith in sure and certain hope of a resurrection to eternal life.

XV. REMEMBER that *logic* and *ontology* or *metaphysics* are necessary sciences, though they have been greatly abused by scholastic writers who have professed to teach them in former ages. Not only all *students*, whether they design the profession of *theology*, *law* or *physic*, but all *gentlemen* should at least acquire a superficial knowledge of them. The introduction of so many subtleties, nice distinctions, and insignificant terms without clear ideas, has brought a great part of the *logic* and *metaphysics* of the schools into just contempt. Their *logic* has appeared the mere art of wrangling, and their *metaphysics* the skill of splitting an hair, of distinguishing without a difference, and of putting long hard names upon common things, and sometimes upon a confused jumble of things which have no clear ideas belonging to them.

It is certain, that an unknown heap of trifles and impertinences have been intermingled with these useful parts of learning, upon which account many persons in this polite age have made it a part of their breeding to throw a jest upon them; and
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to rally them well, has been esteemed a more valuable talent than to understand them.

BUT this is running into wide extremes; nor ought these parts of science to be abandoned by the *wise*, because some writers of former ages have played the fool with them. *True logic* teaches us to use our reason well, and brings light into the understanding: *true metaphysics* or *ontology*, casts a light upon all the objects of thought and meditation, by ranging every being with all the absolute and relative perfections and properties, modes and attendants of it in proper ranks or classes, and thereby it discovers the various relations of things to each other, and what are their general or special differences from each other, wherein a great part of human knowledge consists. And by this means it greatly conduces to instruct us in *method*, or the disposition of every thing into its proper rank and class of beings, attributes or actions.

XVI. IF I were to say any thing of *natural philosophy*, I would venture to lay down my sentiments thus.

I THINK it must needs be very useful to a *divine* to understand something of *natural science*. The mere natural history of *birds*, *beasts*, and *fishes*, of *insects*, *trees* and *plants*, as well as of *meteors*, such as *clouds*, *thunders*, *lightnings*, *snow*, *hail*,
frost,

frost, &c. in all their common or uncommon appearances, may be of considerable use to one who studies *divinity*, to give him a wider and more delightful view of the works of God, and to furnish him with lively and happy images and metaphors drawn from the large volume of nature, to display and represent the things of God and religion in the most beautiful and affecting colours.

AND if the mere *history* of these things be useful for this purpose, surely it will be of further advantage to be led into the *reasons*, *causes* and *effects* of these natural objects and appearances, and to know the established laws of nature, matter and motion, whereby the great God carries on his extensive works of providence from the creation to this day.

I CONFESS, the old *Aristotelcan* scheme of this science, will teach us very little that is worth the knowing about these matters: but the later writers, who have explained nature and its operations in a more sensible and geometrical manner, are well worth the moderate study of a divine; especially those who have followed the principles of that wonder of our age and nation, Sir *Isaac Newton*. There is much pleasure and entertainment, as well as real profit, to be derived from those admirable improvements which have been advanced in *natural philosophy*

sophy of late years, by the assistance of *mathematical* learning, as well as from the multitude of *experiments* which have been made and are still making in natural subjects.

XVII. THIS is a science which indeed eminently belongs to the *physician*: he ought to know all the parts of *human nature*, what are the sound and healthy functions of an animal body, and what are the distempers and dangers which attend it; he should also be furnished with a large knowledge of *plants* and *minerals*, and every thing which makes up the *materia medica*, or the ingredients of which medicines are made; and many other things in natural philosophy are subservient to his profession, as well as to the kindred art of *surgery*.

XVIII. QUESTIONS about the *powers and operations of nature*, may also sometimes come into the *lawyer's* cognizance, especially such as relate to assaults, wounds, murders, &c. I remember I have read a trial of a man for *murder by drowning*, wherein the judge on the bench heard several arguments concerning the lungs being filled or not filled with water, by inspiration or expiration, &c. to all which he professed himself so much a stranger, as did not do him any great honour in public.

XIX. BUT I think no *divine* who can obtain it, should be utterly destitute of this
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knowledge. By the assistance of this study, he will be better able to survey the various monuments of creating wisdom in the heavens, the earth and the seas, with wonder and worship: and by the use of a moderate skill in this science, he may communicate so much of the astonishing works of God in the formation and government of this visible world, and so far instruct many of his hearers, as may assist the transfusion of the same ideas into their minds, and raise them to the same delightful exercises of devotion. *O Lord, how manifold are thy works? In wisdom hast thou made them all! They are sought out by all that have pleasure in them.*

BESIDES, it is worthy of the notice of every student in *theology*, that he ought to have some acquaintance with the *principles of nature*, that he may judge a little how far they will go; so that he may not be imposed upon to take every strange appearance in nature for a *miracle*, that he may reason the clearer upon this subject, that he may better confirm the miracles of *Moses* and of *Christ*, nor yield up his faith to any pretences of *prodigy* and *wonder*, which are either the occasional and uncommon operations of the elements, or the crafty sleights of men well skilled in philosophy and mechanical operations, to delude the simple.

XX. THE knowledge also of *animal nature* and of the *rational soul of man*, and the mutual influence of these two ingredients of our composition upon each other, is worthy the study of a *divine*. It is of great importance to persons of this character and office, to judge how far the animal powers have influence upon such and such particular appearances and practices of mankind; how far the appetites or passions of human nature are owing to the flesh and blood, or to the mind; how far they may be moderated, and how far they ought to be subdued; and what are the happiest methods of obtaining these ends. By this science also we may be better informed, how far these passions or appetites are lawful, and how far they are criminal, by considering how far they are subject to the power of the will, and how far they may be changed and corrected by our watchfulness, care and diligence.

IT comes also very properly under the cognizance of this profession, to be able in some measure to determine questions which may arise relating to real *inspiration* or *prophecy*, to wild *enthusiasm*, to fits of a *convulsive* kind, to *melancholy* or *phrensy*, &c. and what directions are proper to be given concerning any appearances of this nature.

XXI. NEXT to the knowledge of *natural things*, and acquaintance with the

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human nature and constitution, which is made up of soul and body, I think *natural religion* properly takes its place. This consists of these two parts, *viz.* (1.) The *speculative or contemplative*, which is the *knowledge of God* in his various perfections, and in his relations to his rational creatures, so far as may be known by the light of nature, which heretofore used to be called the *second part of metaphysics*. It concludes also (2.) That which is *practical or active*, which is the *knowledge of the several duties* that arise from our relation to God, and our relation to fellow-creatures, and our proper conduct and government of ourselves: this has been used to be called *ethics*, or *moral philosophy*.

XXII. THE knowledge of these things is proper for all men of learning; not only because it teaches them to obtain juster views of the several parts of *revealed religion*, and of *christianity* which are built upon them, but because every branch of natural religion and of moral duty is contained, and necessarily implied in all the revealed religions that ever God prescribed to the world. We may well suspect that religion does not come from God, which renounces any part of natural duty.

WHETHER mankind live under the dispensation of the *Patriarchs*, or of *Moses*, or the *Prophets*, or of our Lord *Jesus Christ*,
still

still we are bound to know the one true God, and to practise all that adoration and reverence, all that love to him, that faith in his perfections, with that obedience and submission to his will, which *natural religion requires*. We are still bound to exercise that justice, truth and goodness towards our neighbours, that restraint and moderation of our own appetites and passions, and that regular behaviour towards ourselves and all our fellow-creatures around us, which *moral philosophy* teaches. There is no sort of revealed religion that will dispense with these natural obligations : and a happy acquaintance with the several appetites, inclinations, and passions of human nature, and the best methods to rule and restrain, to direct and govern them, are our constant business, and ought to be our everlasting study.

YET I would lay down this *caution*, viz. That since students are instructed in the *knowledge of the true God* in their lectures on *Christianity*, and since among the *Christian* duties they are also taught all the *moral dictates* of the light of nature, or a complete scheme of *ethics*, there is no absolute necessity of learning these two parts of *natural religion*, as distinct sciences, separate and by themselves : but still it is of great importance for a tutor, while he is reading to his pupils these parts of the *Christian* religion, to give them notice

how far the light of nature or mere reason will instruct us in these doctrines and duties, and *how far* we are obliged to divine revelation and scripture, for clearing up and establishing the firm foundations of the one, for affording us superior motives and powers to practise the other, for raising them to more exalted degrees, and building so glorious a superstructure upon them.

XXIII. THE study of *natural religion*, viz. The knowledge of God and the rules of virtue and piety, as far as they are discovered by the light of nature, is needful indeed to prove the truth of *divine revelation* or *scripture*, in the most effectual manner: but after the divine authority of scripture is established, that will be a very sufficient spring from whence the bulk of mankind may derive their knowledge of *divinity* or the *Christian religion*, in order to their own present faith and practice, and their future and eternal happiness. In this sense *theology* is a science, necessary for every one that hopes for the favour of God and the felicity of another world; and it is of infinitely more importance than any of the arts and sciences, which belong to any of the learned professions here on earth.

XXIV. PERHAPS it will be thought necessary I should say something concerning the study of the *civil law*, or the law of nature and nations.

If we would speak with great justness and propriety, the *civil law* signifies the peculiar law of each state, country or city : but what we now usually mean by the *civil law*, is a body of laws composed out of the best of the *Roman* and *Grecian* laws, and which was in the main received and observed through all the *Roman* dominions for above twelve hundred years.

The *Romans* took the first grounds of this law from what they call *the twelve tables*, which were the abridgments of the laws of *Solon* at *Athens*, and of other cities in *Greece*, famous for knowledge and wisdom ; to which they added their own antient customs of the city of *Rome*, and the laws which were made there. These written laws were subject to various interpretations, whence controversies daily arising, they were determined by the judgment of the learned ; and these determinations were what they first called *jus civile*. All this by degrees grew to a vast number of volumes ; and therefore the emperor *Justinian*, commanded his chancellor *Tribonian* to reduce them to a perfect body, and this is called *the body of the civil law*.

XXV. BUT that which is of most importance for all learned men to be acquainted with is the *law of nature*, or the knowledge of right and wrong among mankind, whether it be transacted between single

persons or communities, so far as common reason and the light of nature dictate and direct. This is what *Puffendorf* calls the *law of nature and nations*, as will appear if you consult sect. 3. chap. III. of that most valuable *folio* he has written on the subject; which is well worthy the study of every man of learning, particularly *lawyers* and *divines*, together with other treatises on the same theme.

IF any question proposed relate to right and property, and justice between man and man, in any polite and civilized country, though it must be adjudged chiefly according to the particular statutes and laws of that country, yet the knowledge of the *law of nature* will very considerably assist the *lawyer* and the civil *judge* in the determination thereof. And this knowledge will be of great use to *divines*, not only in deciding of cases of conscience among men, and answering any difficult enquiries which may be proposed to them on this subject, but it will greatly assist them also in their studies relating to the law of God, and the performance or violation thereof, the nature of duty and sin, reward and punishment.

XXVI. I HAVE spoken something of the *languages* before, but let me here resume the subject, and put in a few thoughts about those studies which are wont to be called
philo-

philological; such as *history*, *languages*, *grammar*, *rhetoric*, *poesy*, and *criticism*.

AN acquaintance with some of the *learned languages* at least, is necessary for all the three learned professions.

XXVII. THE *lawyers*, who have the least need of foreign tongues, ought to understand *Latin*. During many ages past, very important matters in the *law* were always written and managed in that language by the *lawyers*, as prescriptions in medicine by the *physicians*, and citations of the scriptures in divinity were always made in *Latin* by the *divines*. Prayers also were ordained to be said publicly and privately in the *Roman* tongue: *Pater-nosters* and *Ave-marias* were half the devotion of those ages. These cruel impositions upon the people, would not suffer them to read in their own mother tongue what was done, either to or for, their own *souls*, their *bodies*, or their *estates*. I am ready to suspect this was all owing to the craft and policy of the priesthood and church of *Rome*, which endeavoured to aggrandize themselves, and exalt their own profession into a sovereign tyranny, and to make mere slaves of the *laity* among mankind, by keeping them in utter ignorance, darkness and dependence. And they were willing to compound the matter with the *physicians* and the *lawyers*, and allow them a small share in this

tyranny over the populace, to maintain their own supreme dominion over all.

BUT we thank God, the world is grown something wiser ; and of late years, the *British parliament* has been pleased to give relief from that bondage in matters relating to the *law* also, as in the age of the reformation we were delivered from saying our prayers in *Latin*, from being bound to read the word of God in a tongue unknown to the people, and from living in an everlasting subjection to the clergy in matters of this life and the life to come.

BUT to return. There are still so many forms of proceedings in judicature, and things called by *Latin* names in the profession of the law, and so many barbarous words with *Latin* terminations, that it is necessary *lawyers* should understand this language. Some acquaintance also with the old *French* tongue is needful for the same persons and profession, since the *temples* of *Littleton*, which are a sort of Bible to the gentlemen of the long robe, were written in that language : and this tongue has been interwoven in some forms of the *English* law, from the days of *William* the conqueror, who came from *Normandy* in *France*.

XXVIII. *PHYSICIANS* should be skilled in the *Greek* as well as in the *Latin*, because their great master *Hippocrates* wrote in
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that tongue, and his writings are still of good value and use. A multitude of the names, both of the parts of the body, of diseases, and of medicines, are derived from the *Greek* language: and there are many excellent books of *physic* both in the theoretical and practical parts of it, which are delivered to the world in the *Roman* tongue, and of which that profession should not be ignorant.

XXIX. SUCH as intend the study of *theology*, should be well acquainted also with the *Latin*, because it has been for many hundred years the language of the schools of learning: their disputations are generally limited to that language, and many and excellent books of divinity must be entirely concealed from the students, unless they are acquainted with *Latin* authors.

BUT those that design the sacred profession of *theology*, should make it their labour of chief importance to be very conversant with their Bibles, both in the Old and New Testament: and this requires some knowledge of those original languages, *Greek* and *Hebrew*, in which the scriptures were written. All that will pursue these studies with honour, should be able to read the Old Testament tolerably in the *Hebrew* tongue: at least they should be so far acquainted with it, as to find out the sense of a text by the help of a dictionary. But
 scarce

scarce any man should be thought worthy of the name of a solid divine or a skilful teacher of the gospel in these days of light and liberty, unless he has pretty good knowledge of the *Greek*, since all the important points of the *Christian* religion are derived from the *New Testament*, which was first written in that language.

XXX. As for the *Syriac* and *Arabic* tongues, if one divine in thirty or in three hundred, travel far into these regions, it is enough. A few learned men skilled in these languages, will make sufficient remarks upon them for the service of the whole *Christian* world; which remarks may sometimes happen to be of use to those *divines*, who are unacquainted with them in reading the Bible. But the advantage of these tongues is not of so great importance as it has been too often represented. My reader will agree with me when he considers, that the chief *uses* of them are these.

THE *Arabic* is a language which has some kindred and affinity to the *Hebrew*, and perhaps we may now and then guess at the sense of some uncommon and doubtful *Hebrew* word, which is found but once or twice in the Bible, by its supposed affinity to the *Arabic*: but whatsoever conjectures may be made by some kindred of a *Hebrew* word to an *Arabic* root, yet there is no certainty to be gathered from it; for even
words

words of the same language which are undoubtedly derived from the same theme or primitive, will give us but very doubtful and sorry information concerning the true sense of kindred words which spring from the same theme.

LET me give a plain instance or two of this uncertainty. The word *strages* signifies *slaughter*; *stratum* is *Latin* for a *bed*; *stramen* is *straw*; and *stragulum* is a *quilt* or *coverlet*: they are all drawn and derived from *sterno*, which signifies to *throw down*, to *kill*, or to *spread abroad*. Let the critics tell me what certain sense they could put upon either of those four words by their mere cognation with each other, or their derivation from one common verb. Again, who could tell me the certain meaning and precise idea of the word *honest* in *English*, and assure me that it signifies a *man of integrity, justice and probity*, though it is evidently derived from *honestus* in *Latin*? Whereas *honestus* hath a very different idea, and signifies a *man of some figure in the world*, or a *man of honour*. Let any man judge then, how little service toward explaining the *Hebrew* tongue can be furnished from all the language of *Arabia*. Surely a great part of the long learned fatigues and tiresome travels of men through this country, is almost vain and useless to make the *Hebrew* Bible better understood.

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As for the *Syriac* language, it is granted there may be some small advantage drawn from the knowledge of it, because there is a very ancient translation of the *New Testament* in that tongue: and perhaps this may sometimes give a proper and apposite meaning to a difficult and doubtful text, and offer a fair hint for recovering the true meaning of the scripture from the perverse glosses of other writers. But there are several commentators and *lexicographers* who have been acquainted with the *Syriac* language, and have given us the chief of these hints in their writings on scripture.

AND after all, since none of these assistances can yield us a sufficient proof of a true interpretation, and give us the certain sense of a text, who would be persuaded to waste any great number of his better hours in such dry studies, and in labours of so little profit?

XXXI. THE *Chaldean* language indeed is much nearer to the *Hebrew*, and it is proper for a *divine* to have some acquaintance with it, because there are several verses or chapters of *Ezra* and *Daniel* which are written in that language; and the old *Jewish targums* or commentaries, which are written in the *Chaldean* tongue, may sometimes happen to cast a little light upon a doubtful scripture of the *Old Testament*.

BUT it must be still owned, that the knowledge of the *Eastern* tongues does
not

not deserve to be magnified to such a degree, as some of the proficients in them have indulged ; wherein they have carried matters beyond all reason and justice, since scarcely any of the most important subjects of the gospel of *Christ* and the way of salvation, can gain any advantage from them.

XXXII. THE art of *grammar* comes now to be mentioned. It is a distinct thing from the mere knowledge of the languages ; for all mankind are taught from their infancy to speak their mother-tongue, by a natural imitation of their mothers and nurses, and those who are round about them, without any knowledge of the art of *grammar*, and the various observations and rules that relate to it. *Grammar* indeed, is nothing else but rules and observations drawn from the common speech of mankind in their several languages ; and it teaches us to speak and pronounce, to spell and write with propriety and exactness, according to the custom of those in every nation who are, or were supposed to speak and write their own language best. Now it is a shame for a man to pretend to science and study in any of the three learned professions, who is not in some measure acquainted with the propriety of those languages with which he ought to be conversant in his daily studies, and more especially in such as he may sometimes be called upon to write as well as read.

XXXIII.

XXXIII. NEXT to *grammar*, we proceed to consider *rhétoric*.

Now *rhétoric* in general is the *art* of *persuading*, which may be distinguished into these three parts; *viz.* (1.) Conveying the sense of the speaker to the understanding of the hearers in the clearest and most intelligent manner, by the plainest expressions and the most lively and striking representations of it, so that the mind may be thoroughly convinced of the thing proposed. (2.) Persuading the will effectually to chuse or refuse the thing suggested and represented. (3.) Raising the passions in the most vivid and forcible manner, so as to set all the soul and every power of nature at work, to pursue or avoid the thing in debate.

To attain this end, there is not only a great deal of art necessary in the representation of matters to the auditory, but also in the disposition or method of introducing these particular representations, together with the reasons which might convince, and the various methods which might persuade and prevail upon the hearers. There are certain seasons, wherein a violent torrent of oration in a disguised and concealed method, may be more effectual than all the nice forms of *logic* and reasoning. The figures of *interrogation* and *exclamation*, have sometimes a large place and happy effect in this sort of discourse, and no figure
of

of speech should be wanting here, where the speaker has art enough happily to introduce it.

THERE are many *remarks* and *rules* laid down by the teachers of this art, to improve a young genius into those glorious talents whereby *Tully* and *Demosthenes* acquired that amazing influence and success in their own age and nation, and that immortal fame through all nations and ages. And it is with great advantage these rules may be perused and learned. But a happy genius, a lively imagination, and warm passions, together with a due degree of knowledge and skill in the subject to be debated, and a perpetual perusal of the writings of the best orators, and hearing the best speakers, will do more to make an orator, than all the rules of art in the world, without these natural talents and this careful imitation of the most approved and happiest orators.

XXXIV. Now you will presently suppose, that *pleaders at the bar* have great need of this art of *rhetoric*; but it has been a just doubt, whether pleading in our *British* courts of justice, before a skilful judge, should admit of any other aid from *rhetoric*, than that which teaches to open a cause clearly, and spread it in the most perspicuous, complete and impartial manner before the eyes of him that judges: for impartial justice being the thing which is sought, there should be no artifices used,

no eloquence or powers of language employed to persuade the will, or work upon the passions, lest the decisive sentence of the judge should be biaſſed or warped into injustice. For this reason, Mr. *Locke* would banish all *pleaders* in the law for fees, out of his government of *Carolina*, in his posthumous works; though perhaps that great man might possibly be too severe, in so universal a censure of the profession.

XXXV. BUT the case is very different with regard to *divines*: the eloquence of the pulpit, beyond all controversy, has a much larger extent.

THEIR business is not to plead a cause of right and wrong before a wise and skilful judge, but to address all the ranks of mankind, the high and low, the wise and the unwise, the sober and the vicious, and persuade them all to pursue and persevere in virtue with regard to themselves, in justice and goodness with regard to their neighbours, and piety towards God. These are affairs of everlasting importance, and most of the persons to whom these addresses are made, are not wise and skilful judges, but are influenced and drawn strongly to the contrary side by their own sinful appetites and passions, and bribed or biaſſed by the corrupt customs of the world.

THERE is therefore a necessity not only of a clear and faithful representation of things

things to men, in order to convince their reason and judgment, but of all the skill and force of persuasion addressed to the will and the passions. So *Tully* addressed the whole senate of *Rome*, and *Demosthenes* the *Athenian* people, among whom were capacities and inclinations of infinite variety; and therefore they made use of all the lightning and thunder, all the entreaties and terrors, all the soothing elegancies and the flowery beauties of language which their art could furnish them with. *Divines* in the pulpit have much the same sort of hearers, and therefore they should imitate those ancient examples. The *understanding* indeed ought to be first convinced, by the plainest and strongest force of reasoning; but when this is done, all the powerful motives should be used which have any just influence upon human nature, all the springs of passion should be touched, to awaken the stupid and the thoughtless into consideration, to penetrate and melt the hardest heart, to persuade the unwilling, to excite the lazy, to reclaim the obstinate, and reform the vicious part of mankind, as well as to encourage those who are humble and pious, and to support their practice and their hope. The tribes of men are sunk into so fatal a degeneracy and dreadful distance from God, and from all that is holy and happy, that all the eloquence

which a preacher is master of, should be employed, in order to recover the world from its shameful ruin and wretchedness by the gospel of our blessed Saviour, and restore it to virtue and piety, to God and happiness, by the divine power of this gospel. O may such glorious masters of sacred oratory never be wanting in the pulpits of *Great-Britain*!

XXXVI. SHALL I now speak something of my sentiments concerning *poesy*?

As for books of *poesy*, whether in the learned or in the modern languages, they are of great use to be read at hours of leisure, by all persons that make any pretence to good education or learning; and that for several reasons.

I. BECAUSE there are many couplets or stanzas written in poetic measures, which contain a *variety of morals or rules of practice* relating to the common prudentials of mankind, as well as to matters of *religion*, and the poetic numbers (or rhyme, if there be any) add very considerable force to the memory.

BESIDES, many an elegant and admirable sentiment or description of things which are found among the poets, are well worth committing to memory, and the particular measures of verse greatly assist us in recollecting such excellent passages,
which

which might sometimes raise our conversation from low and grovelling subjects.

2. IN *heroic verse*, but especially in the *grander lyrics*, there are sometimes such noble elevations of thought and passion as illuminate all things around us, and convey to the soul most exalted and magnificent images and sublime sentiments: these furnish us with glorious springs and *mediums* to raise and aggrandize our conceptions, to warm our souls, to awaken the better passions, and to elevate them even to a divine pitch, and that for devotional purposes. It is the *lyric ode* which has shewn to the world some of the happiest examples of this kind, and I cannot say but this part of poesy has been my favourite amusement above all others.

AND for this reason it is, that I have never thought the *heroic* poems, *Greek*, *Latin*, nor *English*, which have obtained the highest fame in the world, are sufficiently diversified, exalted or animated, for want of the interspersion of now and then an *elegiac* or a *lyric ode*. This might have been done with great and beautiful propriety, where the poet has introduced a song at a feast, or the joys of a victory, or the soliloquies of divine satisfaction, or the pensive and despairing agonies of distressing sorrow. Why should that which is called the *most glorious form of poesy*, be bound

down and confined, to such a long and endless uniformity of measures, when it should kindle or melt the soul, swell or sink it into all the various and transporting changes of which human nature is capable?

COWLEY in his unfinished fragment of the *Davideis*, has shewn us this way to improvement; and whatever blemishes may be found in other parts of that *heroic essay*, this beauty and glory of it ought to be preserved for imitation. I am well assured, that if *Homer* and *Virgil* had happened to practise it, it would have been renowned and glorified by every critic. I am greatly mistaken, if this wise mixture of numbers would not be a further reach of perfection than they have ever attained to without it: let it be remembered, that it is not nature and strict reason, but a weak and awful reverence for antiquity and the vogue of fallible men, that has established those *Greek* and *Roman* writings as absolute and complete patterns. In several ages there have been some men of learning, who have very justly disputed this glory, and have pointed to many of their mistakes.

3. BUT still there is another end of reading poesy, and perhaps the most considerable advantage to be obtained from it by the bulk of mankind, and that is, to furnish our tongues with the richest and the most polite variety of phrases and words upon
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all occasions of life or religion. He that writes well in verse will often find a necessity to send his thoughts in search through all the treasure of words that express any one idea in the same language, that so he may comport with the measures, or the rhyme of the verse which he writes, or with his own most beautiful and vivid sentiments of the thing he describes. Now by much reading of this kind we shall insensibly acquire the habit and skill of diversifying our phrases upon all occasions, and of expressing our ideas in the most proper and beautiful language, whether we write or speak of the things of God or men.

IT is pity that some of these harmonious writers have ever indulged any thing uncleanly or impure to defile their paper, and abuse the ears of their readers, or to offend against the rules of the nicest virtue and politeness : but still, amongst the writings of Mr. *Dryden* and Mr. *Pope*, and Dr. *Young*, as well as others, there is a sufficient choice in our own language, wherein we shall not find any indecency to shock the most modest tongue or ear.

PERHAPS there has hardly been a writer in any nation, and I may dare to affirm, there is none in ours, has a richer and happier talent of painting to the life, or has ever discovered such a large and inexhausted variety of description as the celebrated
Mr.

Mr. *Pope*. If you read his translation of *Homer's Iliad*, you will find almost all the terms or phrases in our tongue that are needful to express any thing that is grand or magnificent: but if you peruse his *Odyssée*, which descends much more into common life, there is scarcely any usual subject of discourse or thought, or any ordinary occurrence which he has not cultivated and dressed in the most proper language; and yet still he has ennobled and enlivened even the lower subjects, with the brightest and most agreeable ornaments.

I SHOULD add here also, that if the same author had more frequently employed his pen on divine themes, his short poem on the *Messiah*, and some part of his letters between *Abelard* and *Eloisa*, with that ode of the *dying Christian*, &c. sufficiently assure us, that his pen would have honourably imitated some of the tender scenes of penitential sorrow, as well as the sublimer odes of the *Hebrew psalmist*; and perhaps discovered to us in a better manner than any other translation has done, how great a poet sat upon the throne of *Israel*.

4. AFTER all that I have said, there is yet a further use of reading *poesy*, and that is, when the mind has been fatigued with studies of a more laborious kind, or when it is any ways unfit for the pursuit of more difficult

difficult subjects, it may be as it were unbent, and repose itself a while on the flowery meadows where the muses dwell. It is a very sensible relief to the soul when it is over-tired, to amuse itself with the numbers and the beautiful sentiments of the poets; and in a little time, this agreeable amusement may recover the languid spirits to activity and more important service.

XXXVII. ALL this I propose to the world as my best observations about reading of verse. But if the question were offered to me, *Shall a student of a bright genius never divert himself with writing poesy?* I would answer, *Yes, when he cannot possibly help it:* a lower genius in mature years, would heartily wish that he had spent much more time in reading the best authors of this kind, and employed much fewer hours in writing. But it must be confessed, or supposed at least, that there may be seasons when it is hardly possible for a poetic soul to restrain the fancy or quench the flame, when it is hard to suppress the exuberant flow of lofty sentiments, and prevent the imagination from this sort of style or language: and that is the only season I think, wherein this inclination should be indulged; especially by persons who have devoted themselves to professions of a different kind: and one reason is, because what they write in that hour, is more likely
to

to carry in it some appearances above nature, some happy imitation of the dictates of the muse *.

XXXVIII. THERE are other things besides *history*, *grammar* and *languages*, *rhetoric* and *poesy*, which have been included under the name of *philological* knowledge; such as, an acquaintance with the *notions*, *customs*, *manners*, *tempers*, *polity*, &c. of the various nations of the earth, or the distinct sects and tribes of mankind. This is necessary, in order to understand *history* the better; and every man who is a *lawyer* or a *gentleman*, ought to obtain some acquaintance with these things, without which he can never read *history* to any great advantage, nor can he maintain his own station and character in life with honour and dignity, without some insight into them.

XXXIX. STUDENTS in *divinity* ought to seek a larger acquaintance with the *Jewish* laws, polity, customs, &c. in order to understand many passages of the Old Testament and the New, and to vindicate the sacred writers from the reproaches of infidels. An acquaintance also with many of

* The *muse* in the ancient *heathen* sense is supposed to be a goddess; but in the *philosophic* sense it can mean no more, than a bright genius with a warm and strong imagination, elevated to an uncommon degree.

the *Roman* and *Grecian* affairs is needful to explain several texts of scripture in the New Testament, to lead sincere enquirers into the true and genuine sense of the evangelists and apostles, and to guard their writings from the unreasonable cavils of men.

XL. THE art of *criticism* is reckoned by some as a distinct part of *philology*; but it is in truth nothing else, than a more exact and accurate knowledge or skill in the other parts of it, and a readiness to apply that knowledge upon all occasions, in order to judge well of what relates to these subjects, to explain what is obscure in the authors which we read, to supply what is defective, and amend what is erroneous in manuscripts or ancient copies, to correct the mistakes of authors and editors in the sense or the words, to reconcile the controversies of the learned, and by this means to spread a juster knowledge of these things among the inquisitive part of mankind.

EVERY man who pretends to the learned professions, if he doth not arise to be *critic* himself in *philological* matters, he should be frequently conversing with those books, whether dictionaries, paraphrasts, commentators, or other critics, which may relieve any difficulties he meets with, and give him a more exact acquaintance with those studies which he pursues.

AND whensoever any person is arrived to such a degree of knowledge in these things, as to furnish him well for the practice of *criticism*, let him take great care that pride and vanity, contempt of others, with inward wrath and insolence, do not mingle themselves with his remarks and censures. Let him remember the common frailties of human nature, and the mistakes to which the wisest man is sometimes liable, that he may practise this art with due modesty and candour.

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